WM-F107

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model

'Dolby' and the double-D symbol are the trade marks of Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

SPECIFICATIONS

Frequency range
FM: 87.6–107 MHz (for West Germany)
87.6–108 MHz (for other countries)
AM: 530–1,605 kHz

Antennas
FM: Headphones cord antenna
AM: Built-in ferrite bar antenna

Frequency response (DOLBY NR OFF)
40–15,000 Hz (with the TAPE selector set to CrO_2/METAL)
40–15,000 Hz (with the TAPE selector set to NORM)

Power output
4 mW + 4 mW at dc operation (at 10% harmonic distortion)

Power requirements
1.5 V dc
Built-in solar battery
Built-in nickel-cadmium rechargeable battery
DC IN 1.5 V jack accepts:
- Supplied battery case/belt clip for use with one IEC designation R6 battery (size AA)
- Sony EBP-10 battery case (optional) for use with two IEC designation R6 batteries (size AA)
- Sony AC-D1 AC power adaptor (optional)
  For use on 120 V ac, 60 Hz in US, Canadian models
  For use on 240 V ac, 50 Hz in United Kingdom
  For use on 220 V ac, 50 Hz in European countries
  For use on 110, 120, 220, 240 V ac, adjustable, 50/60 Hz in other countires
- Sony DCC-70 car battery cord (optional) for use with 12 V car battery

Battery life (hours)

Battery	FM reception	Tape playback
Built-in rechargeable (fully changed)	Approx. 10	Approx. 2
Sony SUM-3(NS) New Super	Approx. 10	Approx. 2
Sony Eveready AM3 alkaline	Approx. 20	Approx. 4

For maximum performance we recommend the use of alkaline battery.

Tape Transport Mechanism Type	MF-WMF107-01

0dB = 0.775V

Charging time (full-charge)
Approx. four hours
(Charging time when charging the rechargeable battery with the solar battery, depends on the weather, the sunlight angle, or the battery condition.)

Dimensions
Approx. 78 × 109.8 × 29.2 mm (w/h/d)
($3\frac{1}{8} \times 4\frac{3}{8} \times 1\frac{3}{16}$ inches)
not incl. projecting parts and controls
Approx. 91.5 × 113.8 × 34 mm (w/h/d)
($3\frac{5}{8} \times 4\frac{1}{2} \times 1\frac{3}{8}$ inches)
incl. projecting parts and controls

Weight
Approx. 280 g (10 oz)
not incl. supplied accessories

FEATURES

- Built-in solar battery powers the unit in direct sunlight.
- Built-in rechargeable battery and the supplied battery case power the unit indoors or outdoors, in the absence of sunlight.
- The unit and the supplied battery case/belt clip are designed to be water-resistant, and the supplied headphones (earphones) are designed to be splash-resistant.

MICROFILM

FM/AM STEREO CASSETTE-PLAYER

SONY®

TC

SERVICING NOTES

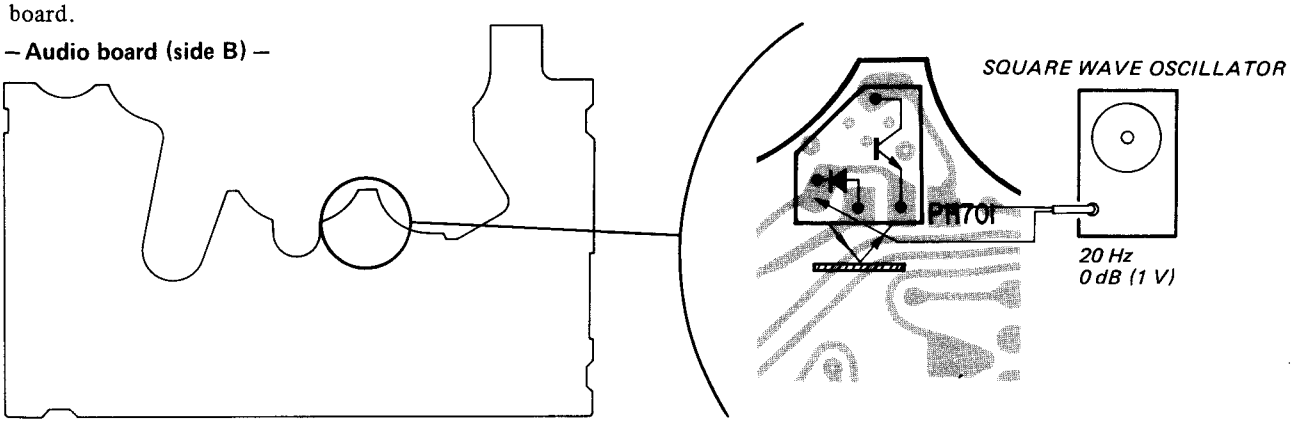
This set detects rotation of reel table by PH701 (Photo interrupter).

It cannot be detected when the audio board removed, because PH701 is mounted on the audio board.

Therefore, the auto off circuit and tape end detection will misoperate.

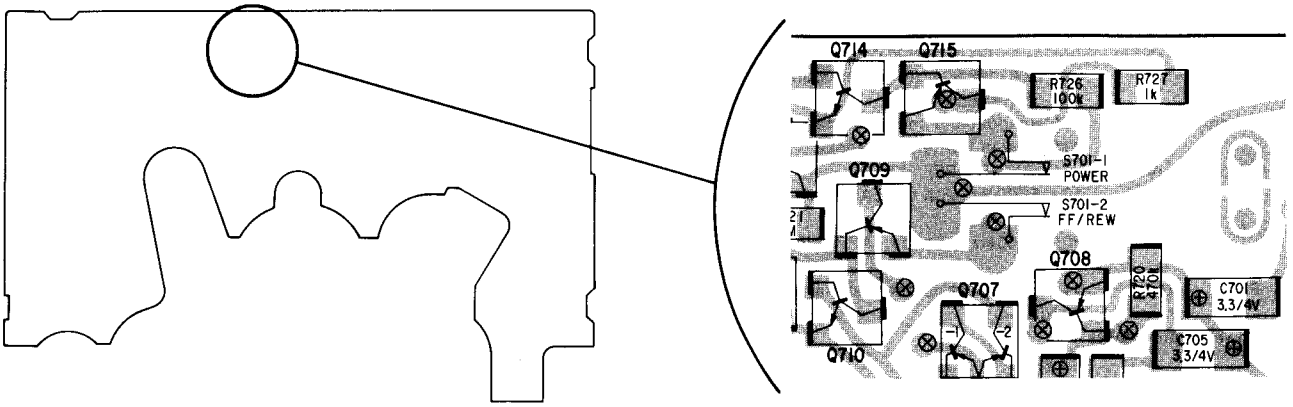
Operation check can be done by the method shown below even when the audio board is removed.

– Audio board (side B) –



- For PLAY, press the ▶ button and turn only the POWER switch ON.
- For FF and REW, press ▶▶ or ◀◀ button and turn both POWER switch and FF/REW switch ON.

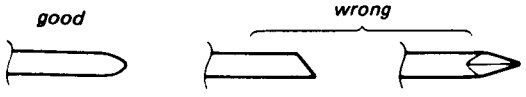
– Audio board (side A) –



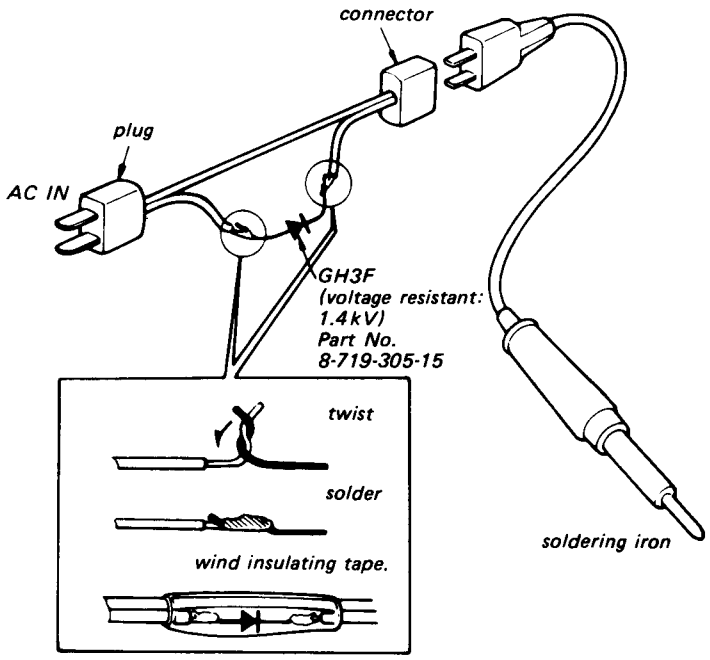
Flexible Circuit Board Repairing

1. Keep the temperature of the soldering iron at 270° ± 10°C during repairing.
   You can maintain the temperature of the soldering iron around 270°C by using the thermal controller as illustrated on the right.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

Tip of soldering iron



To make thermal controller of soldering iron



Replacing chip components

All chip components should be connected and disconnected, using a tapered soldering iron [temperature of the iron tip: less than 280°C (536°F)], a pair of tweezers and braided wire.

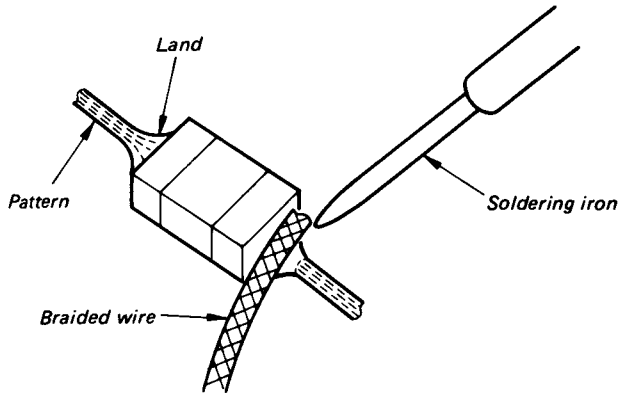
Precautions for replacement

1. **Do not disconnect the chip component forcefully. Otherwise, the pattern may peel off.**
2. **Never re-use a disconnected chip component. Dispose of all old chip components.**
3. **To protect the chip component, heating time for attaching the component should be within 3 seconds.**

○ **Removing chip components**

(1) **Removing solder at electrode**

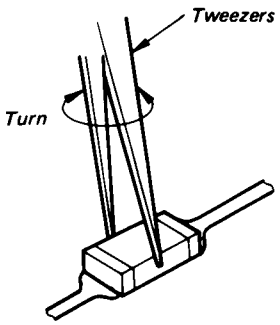
Remove the solder at the electrode, using a thin braided wire. Do not remove the solder of the part (chip component) attached adjacent to the electrode.



(2) **Disconnecting chip components**

Turn the tweezers with the soldering iron alternately applied to both electrodes, and the chip component will be disconnected. Take careful precautions while disconnecting, because if the chip component is forcefully removed the land may peel off.

Never re-use a disconnected chip component.



(3) **Smoothing the soldered surface**

After disconnecting the chip component, remove the solder by using a braided wire to smooth the land surface.

○ **Connecting chip components**

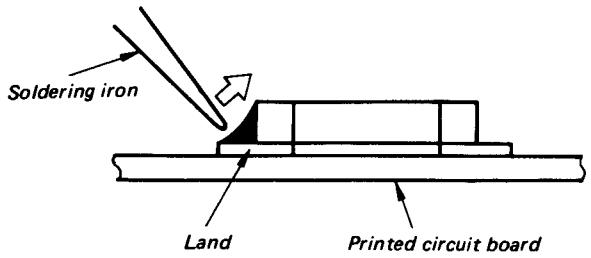
The value of chip components is not displayed on the main body. Take due precautions to avoid mixing new chip components with other ones.

(1) **Applying solder to land on one side**

Apply a thin layer of solder to the land on one side where the chip component is to be connected. Too much solder may cause bridging.

(2) **Speedy soldering**

Hold the chip component at the desired position, using tweezers, and apply the soldering iron in the arrow-marked direction. To protect the chip component, heating time should be within 3 seconds.



(3) **Speedy soldering of electrode on the other side**

Solder the electrode on the other side in the same way as in (2) above.

CHECKING WATERPROOF

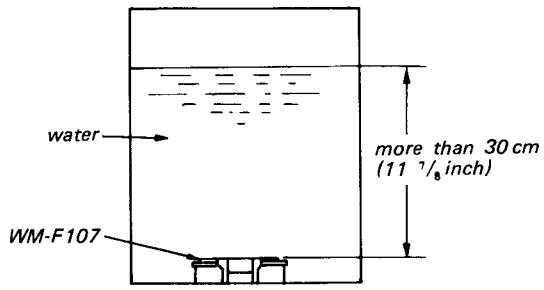
This model is waterproof, so be sure to confirm waterproofing after repair.

2-1. WATERPROOF CHECK

(1) Perform with the ornamental sheet and ornamental plate assy (C)/(D) removed. (See page 5). (If there is leakage when checking with them on, they must be replaced with new ones.)

(2) Insert a tape cassette in the set. (So that it will sink.)

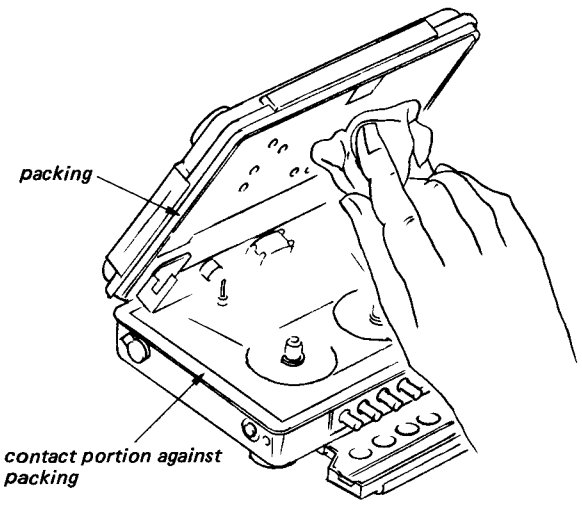
(3) Place in more than 30 cm of water for 30 minutes.



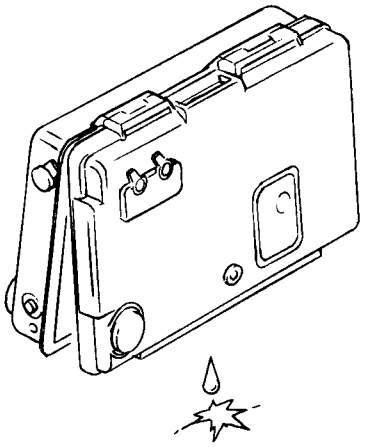
(4) Remove from the water after 30 minutes and wipe off all moisture.

(5) Check all operations. (If water has entered, abnormal operation will occur.)

(6) Open the cassette case and wipe off all moisture on the packing and case sections touching the packing.



(7) Shake the set and confirm that no water comes out.



(8) When waterproofing is confirmed, mount the ornamental sheet and ornamental plate assy (C)/(D). (Wipe off the water on the screw to prevent rusting.)

2-2. IF LEAKAGE OCCURS DURING WATERPROOF CHECK:

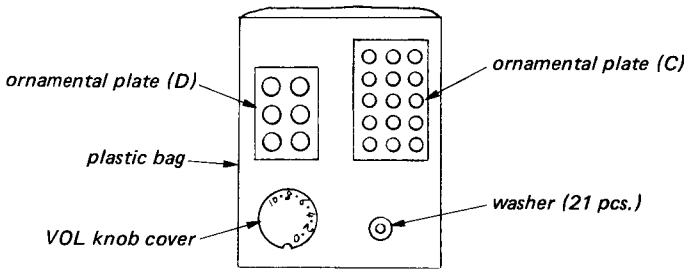
Dry the mechanism section and audio board, jack, etc. with a hairdryer, perform waterproofing procedures again and recheck starting with step (1).

2-1. ORNAMENTAL PLATE AND WASHER ASS'Y

(1) The following part consists of five sets of ornamental plate and washer.

X-3334-813-1 (White) X-3334-814-1 (Yellow)	Ornamental Plate and Washer Ass'y

- **Assembled parts**

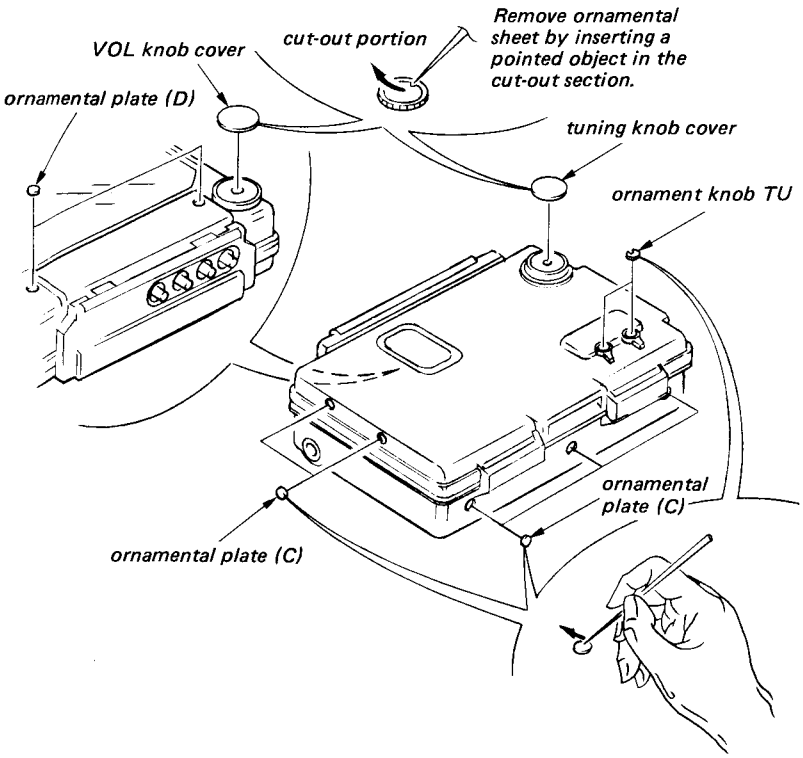


WATERPROOFING REPAIR MATERIALS

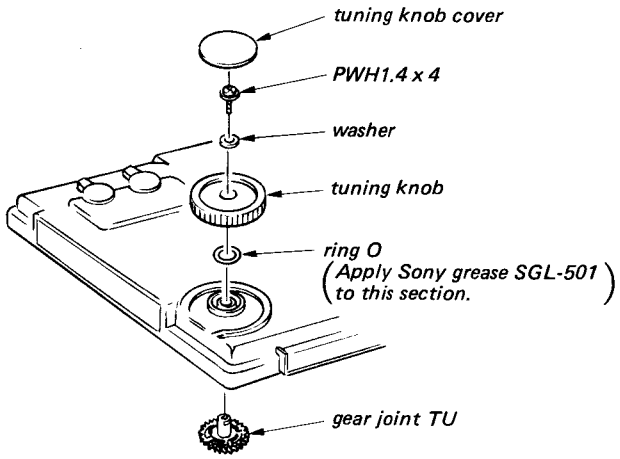
	Part No.
• Sony grease SGL-501	7-662-001-2240

ORNAMENTAL PLATE ASSY (C)/(D), VOL KNOB COVER REMOVAL

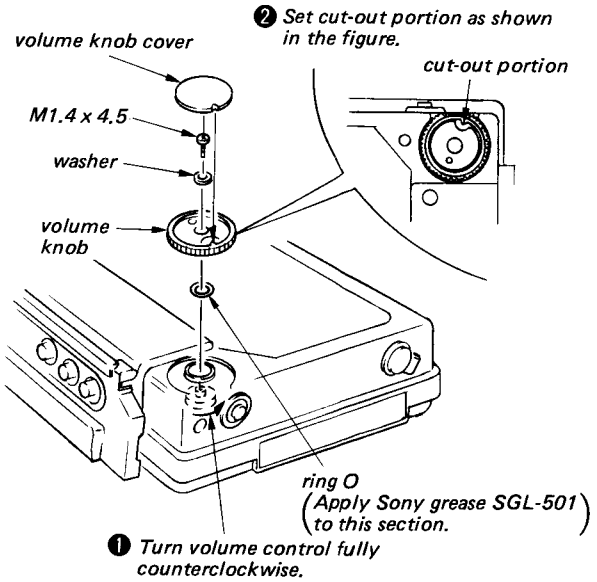
(Replace with a new part when assembling.)


VOL knob cover
cut-out portion
Remove ornamental sheet by inserting a pointed object in the cut-out section.
ornamental plate (D)
tuning knob cover
ornament knob TU
ornamental plate (C)
ornamental plate (C)

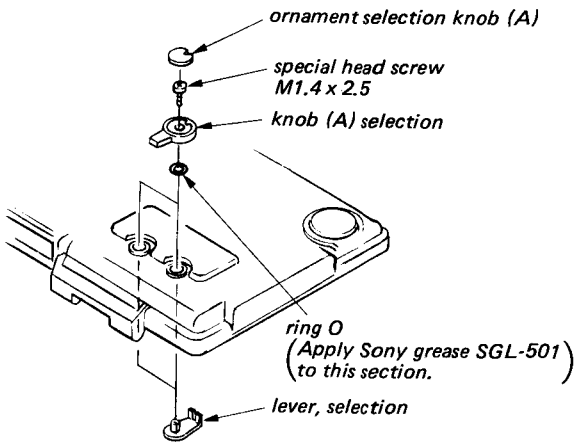
TUNING KNOB REPLACEMENT



VOL KNOB REPLACEMENT

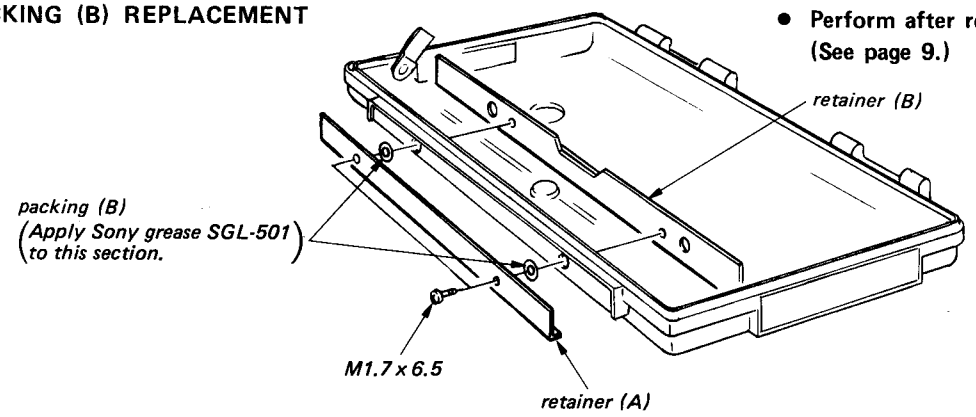


SELECT KNOB REPLACEMENT

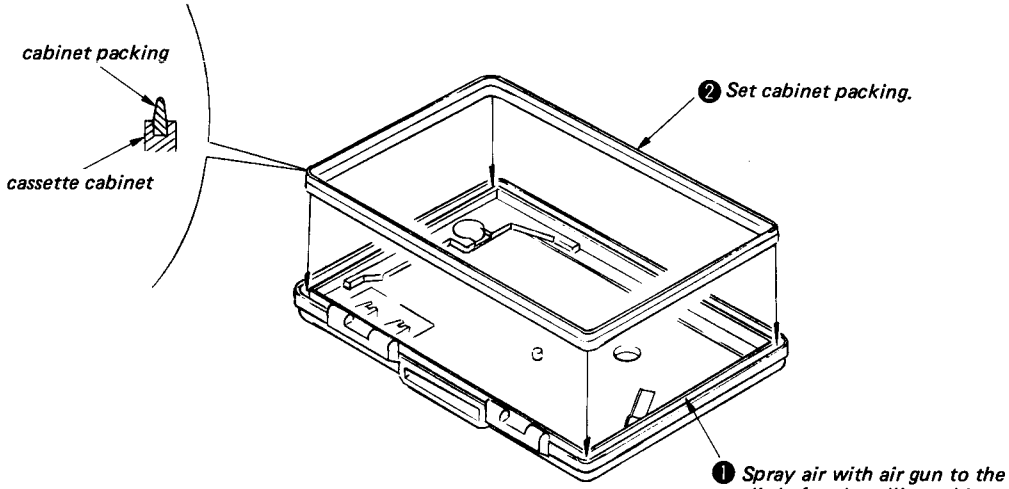

ornament selection knob (A)
special head screw M1.4 x 2.5
knob (A) selection
ring O
(Apply Sony grease SGL-501 to this section.)
lever, selection

PACKING (B) REPLACEMENT

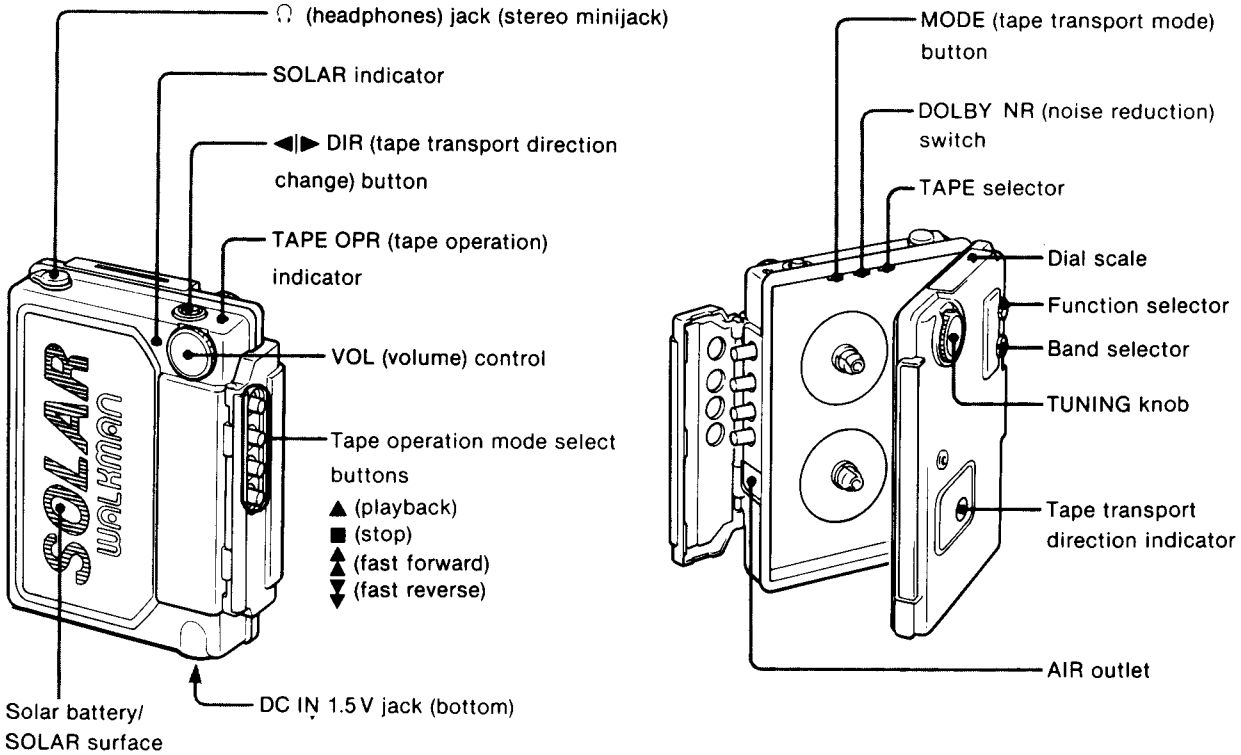
● Perform after removing radio board. (See page 9.)



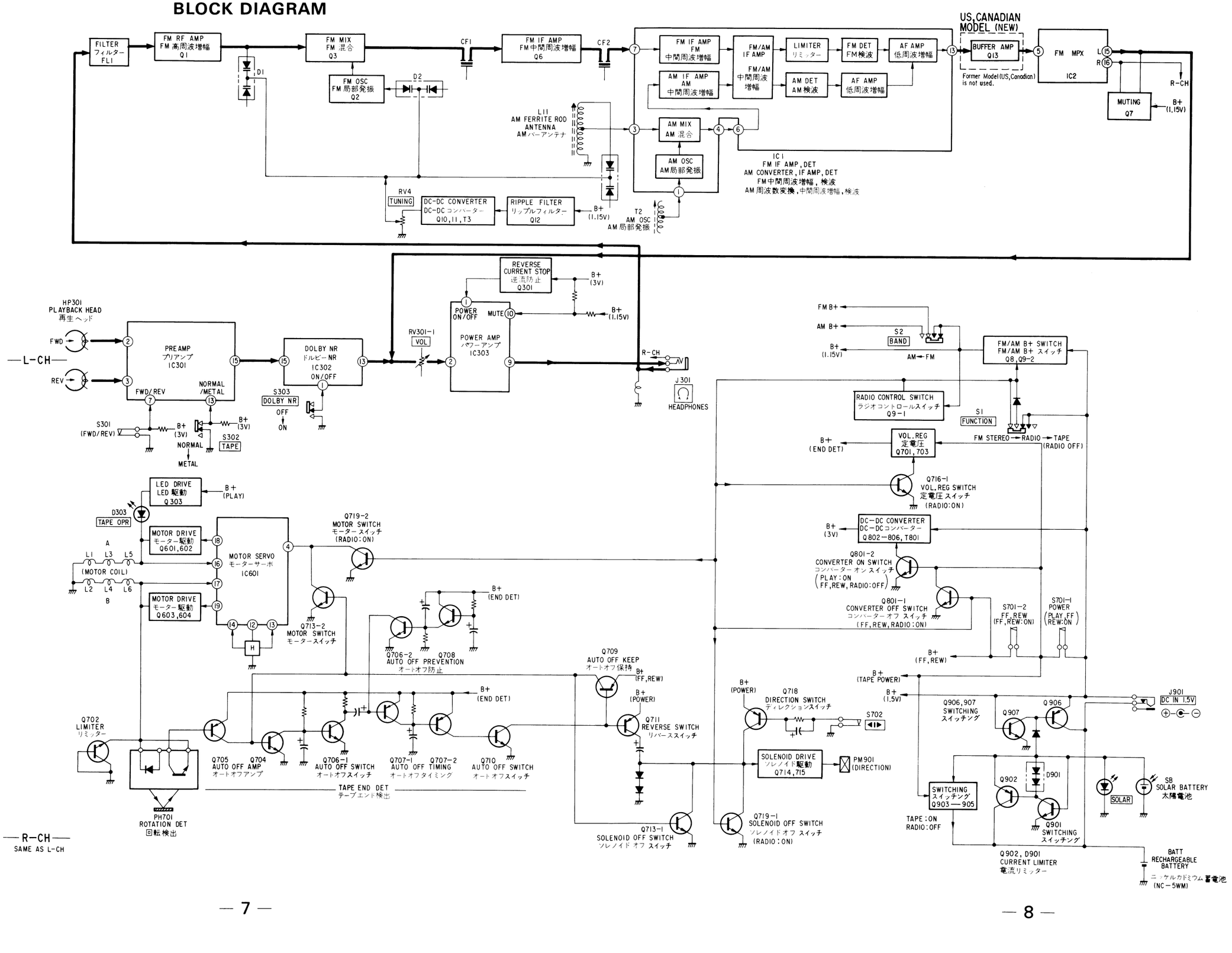
CABINET PACKING REPLACEMENT


cabinet packing
cassette cabinet
❷ Set cabinet packing.
❶ Spray air with air gun to the slit before installing cabinet packing.

PARTS IDENTIFICATION



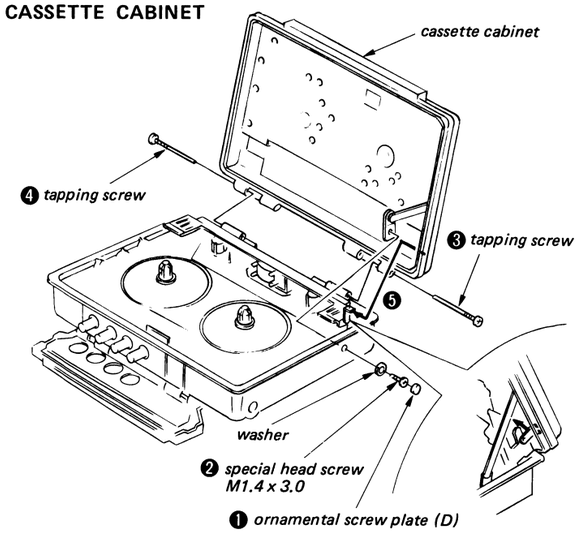
SECTION 1
BLOCK DIAGRAM



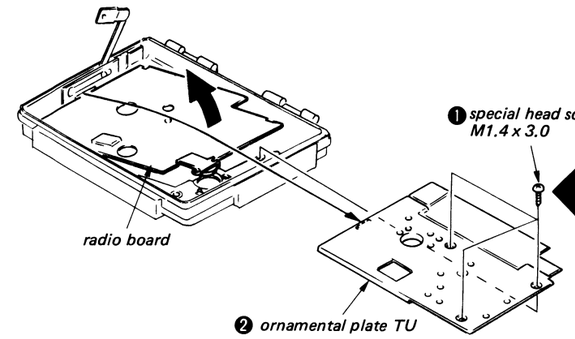
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

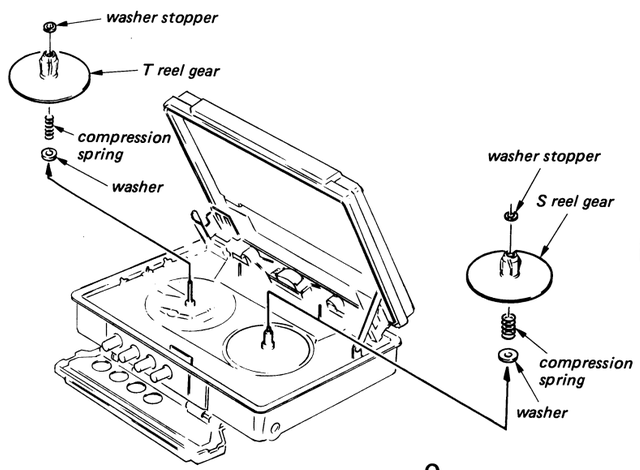
CASSETTE CABINET



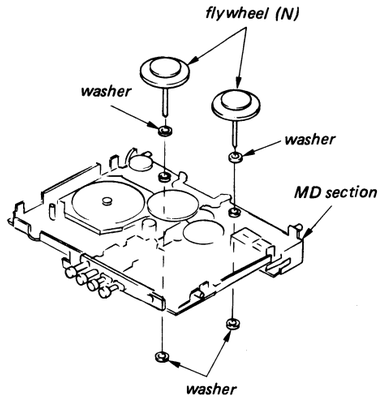
RADIO BOARD



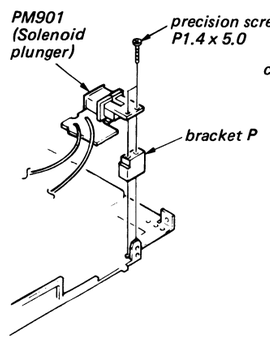
REEL GEAR



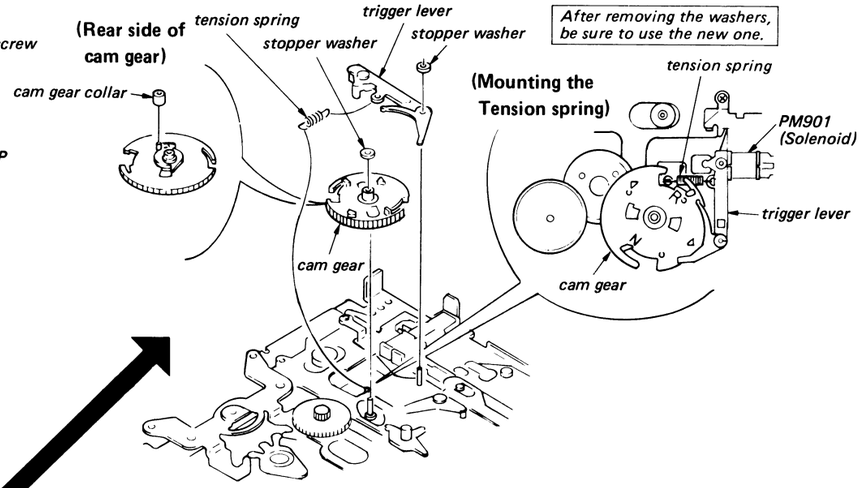
FLYWHEEL



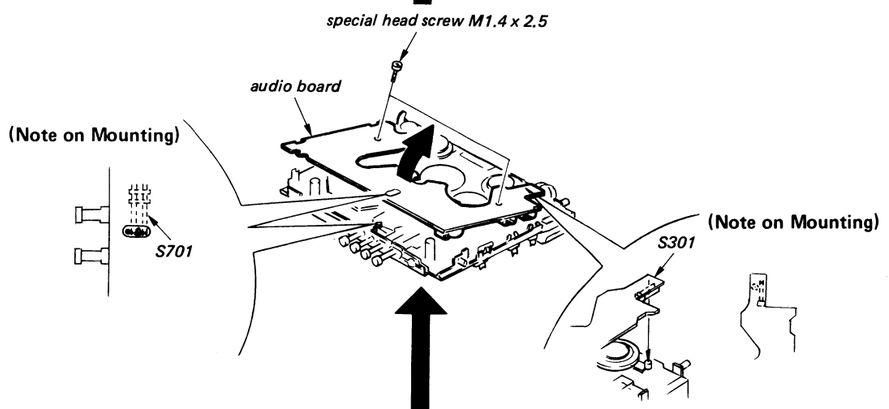
SOLENOID PLUNGER



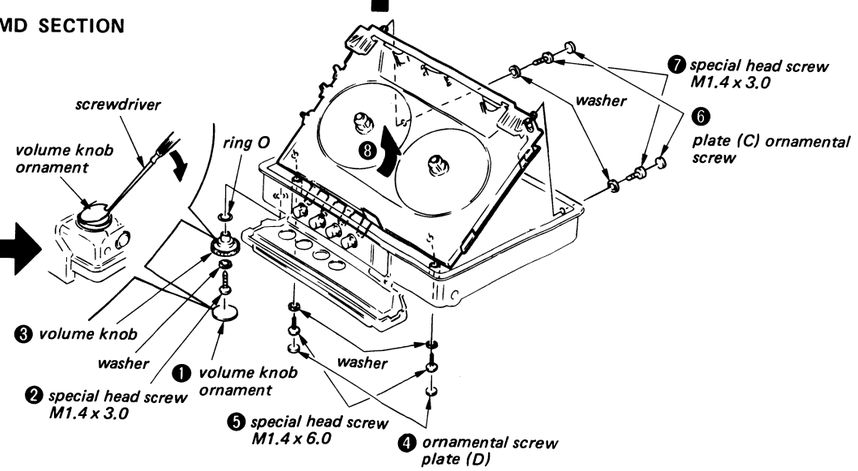
TRIGGER LEVER, CAM GEAR



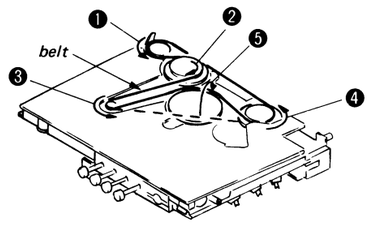
AUDIO BOARD



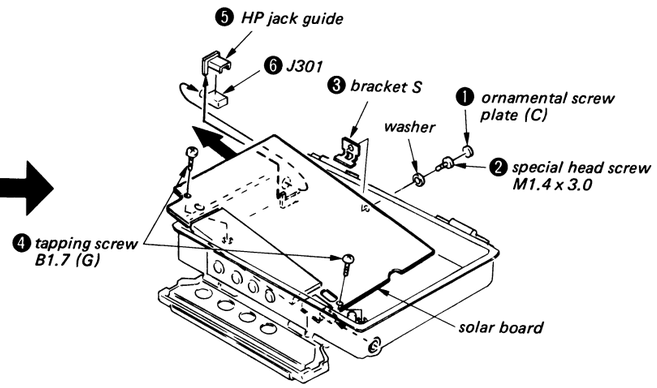
MD SECTION



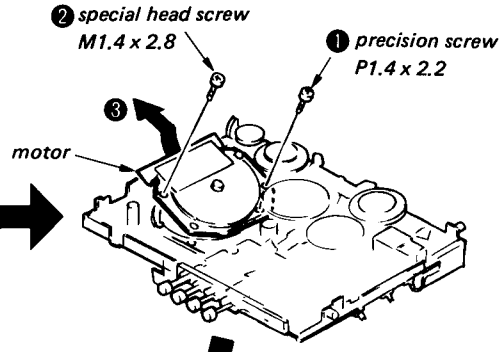
INSTALLING THE BELT



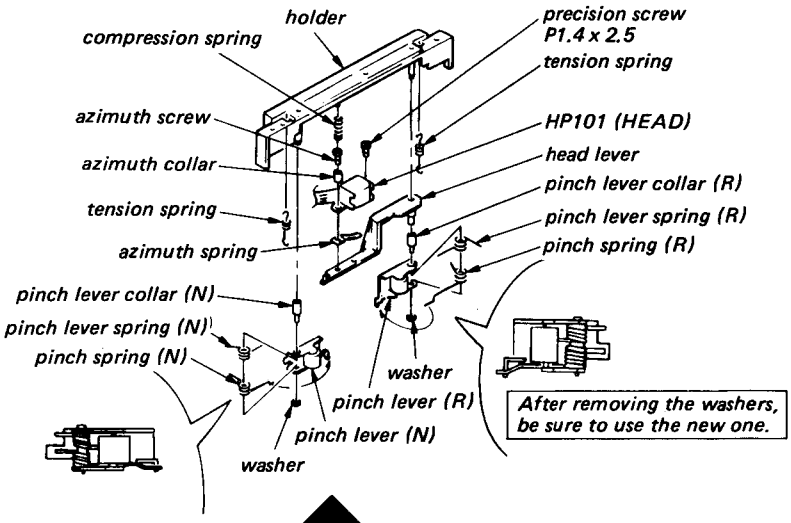
SOLAR BOARD

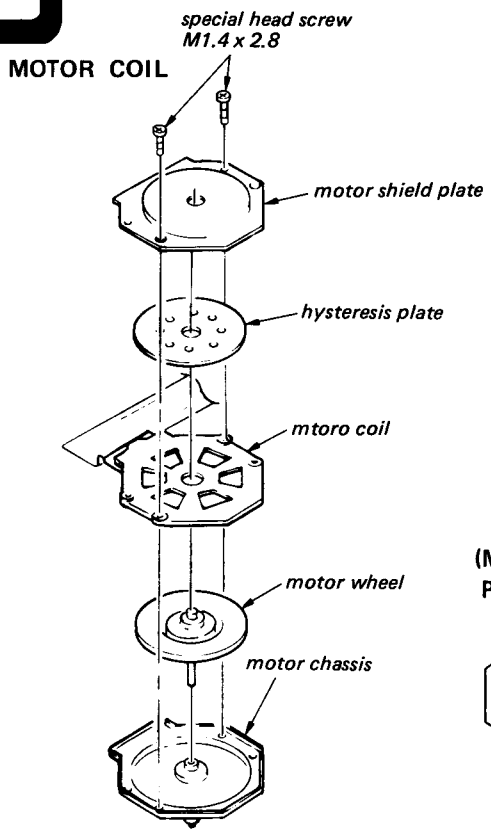


MOTOR

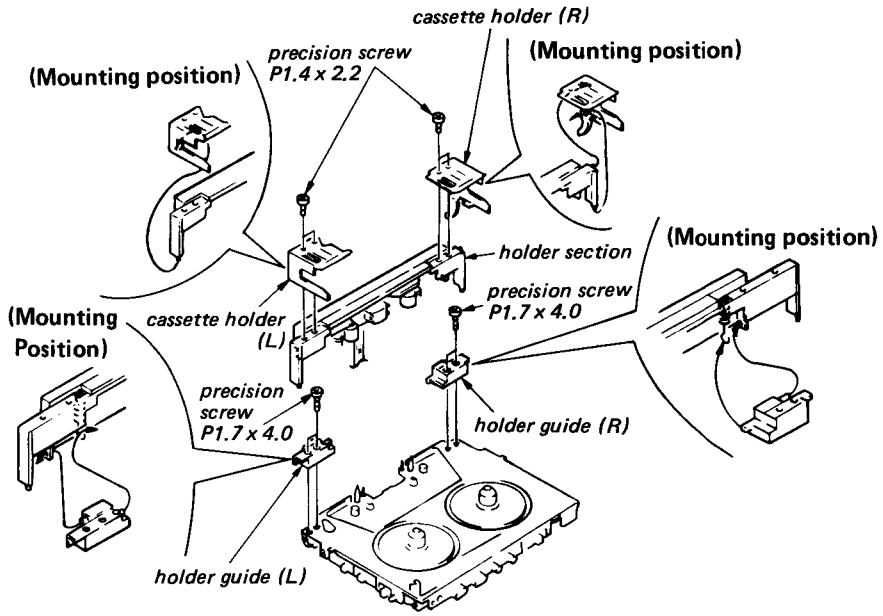


HEAD, PINCH ROLLER

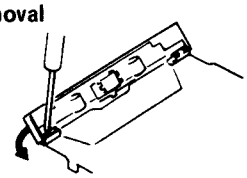




HOLDER



Removal



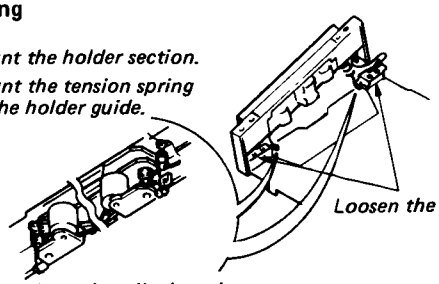
❶ Remove the cassette holder and remove the holder guide screws.

❷ Remove the holder section in the direction of the arrow.

Mounting

❶ Mount the holder section.

❷ Mount the tension spring on the holder guide.

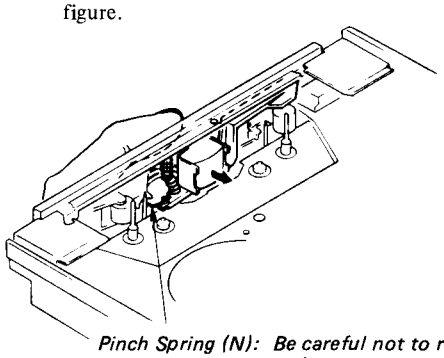


It is easier to install when the tension spring is hooked on the holder guide as illustrated.

2-2. HOW TO REPLACE HP301 (HEAD)

HP301 (HEAD) can be replaced without removing the holder section. The procedure is as follows.

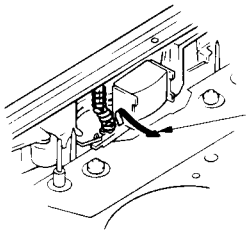
Note: Push HP301 *(HEAD)* in the direction of the arrow by hand, as shown in the figure.



Pinch Spring (N): Be careful not to remove this spring.
This spring comes off easily when HP301 is pressed hard. HP101 (HEAD) can be replaced even with the spring off, but the spring must be returned to its original position.

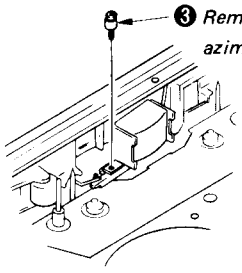
REMOVAL

❶ *Unsolder the head flexible board from the main board (Side B)*



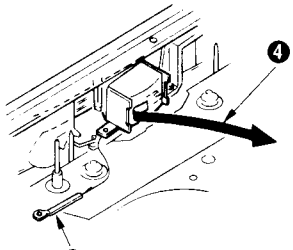
❷ *Remove the compression spring.*

⇩



❸ *Remove the azimuth screw.*

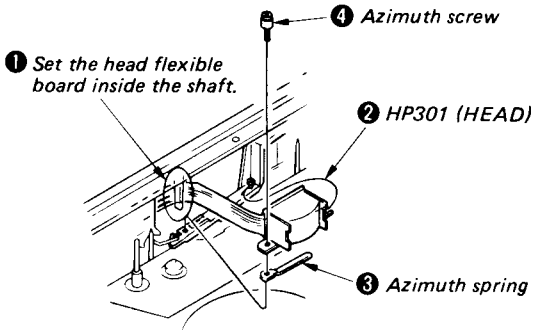
⇩



❹ *Remove the HP301 (HEAD).*

❺ *Azimuth spring*

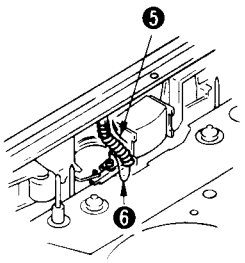
MOUNTING



❹ *Azimuth screw*
❶ *Set the head flexible board inside the shaft.*
❷ *HP301 (HEAD)*
❸ *Azimuth spring*

Note: Handle carefully as the head flexible board is cut easily.

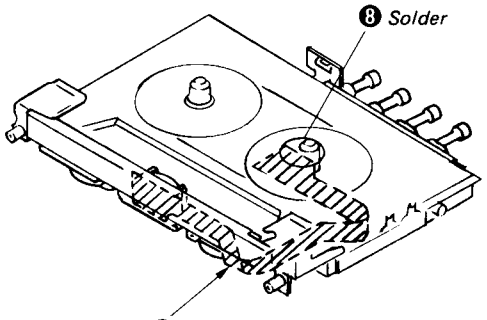
⇩



❺
❻

Note: When mounting the compression spring, it is easier if HP301 (HEAD) is not pressed.

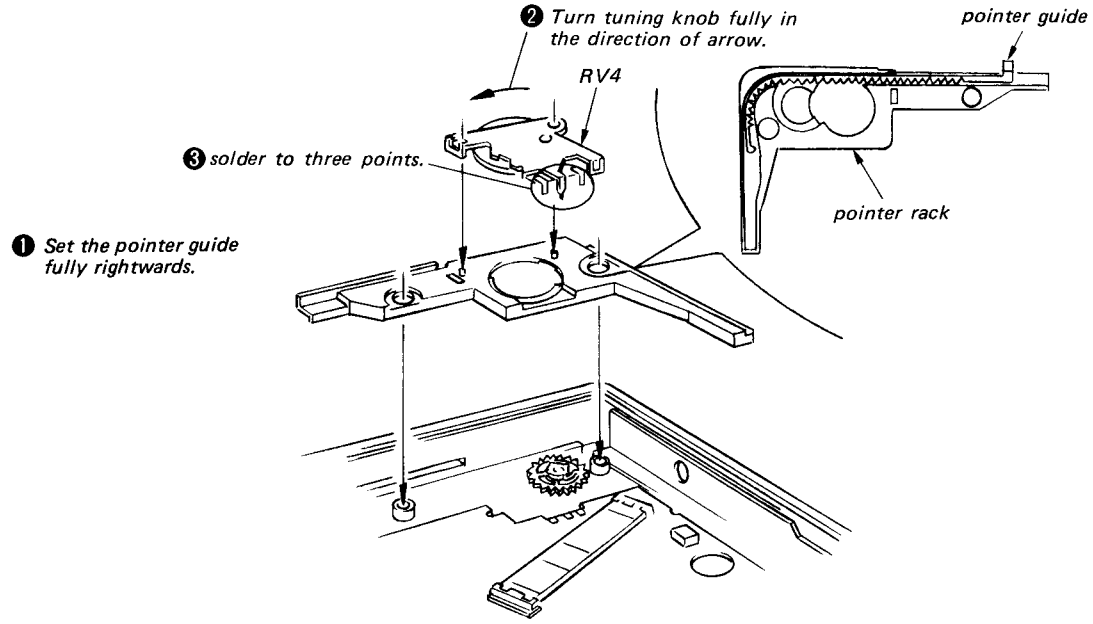
⇩



❽ *Solder*

❼ *Arrange the head flexible board as shown in this figure.*

POINTER SETTING


❷ Turn tuning knob fully in the direction of arrow.
pointer guide
RV4
❸ solder to three points.
pointer rack
❶ Set the pointer guide fully rightwards.

SECTION 3
ADJUSTMENTS

MECHANICAL ADJUSTMENTS AND MEASUREMENT

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

   playback head — rubber belts
   capstan — idlers
   pinch roller

2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (1.3V) unless otherwise noted.

Torque Measurement

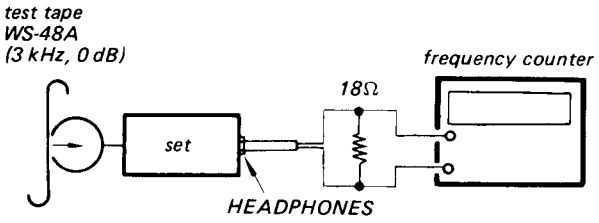
Mode	Torque Meter	Meter Reading
FWD	CQ-102C	25 – 38 g•cm 0.32 – 0.55 oz•inch
FWD Back Tension		1.5 – 3 g•cm 0.02 – 0.04 oz•inch
REV	CQ-102RC	25 – 38 g•cm 0.32 – 0.55 oz•inch
REV Back Tension		1.5 – 3 g cm 0.02 – 0.04 oz•inch
FF	CQ-201B	more than 70 g•cm more than 0.83 oz•inch
REW		more than 70 g•cm more than 0.83 oz•inch

Tape Pulling Force Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 60 g more than 1.76 oz
REV	CQ-403R	more than 60 g more than 1.76 oz

Tape Speed Adjustment

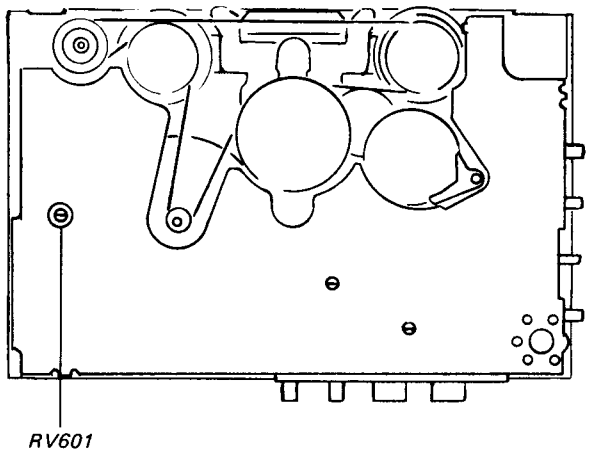
Procedure:



1. Play back WS-48A (Tape center portion) in FWD mode.
   Adjust the RV601 so that the frequency counter reads 3,000 Hz ±30 Hz.
2. Play back WS-48A (Tape center portion) in REV mode.
   Confirm that the reading of frequency counter is within 2.0% from the reading in step 1.

Adjustment Location:

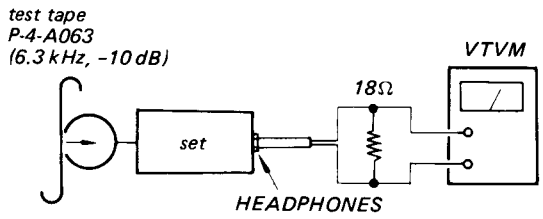
Audio Board – Side B –



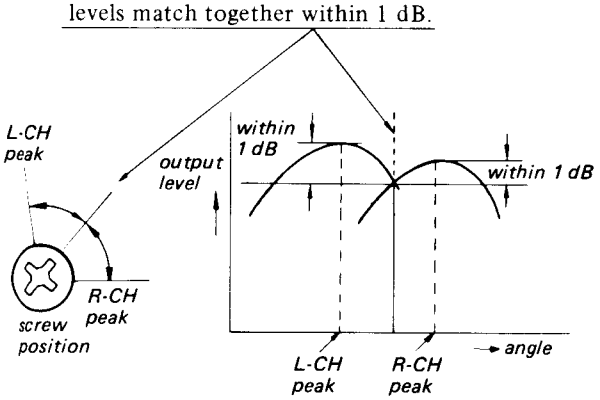
Playback Head Azimuth Adjustment

Procedure:

1. Playback mode

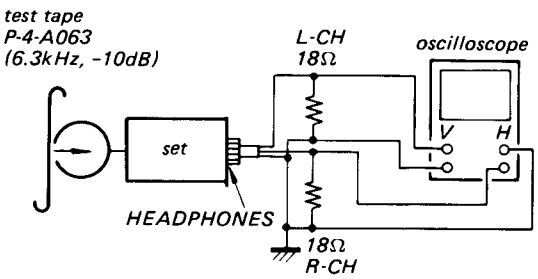


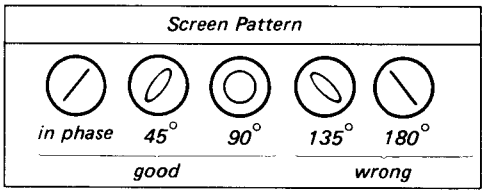
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



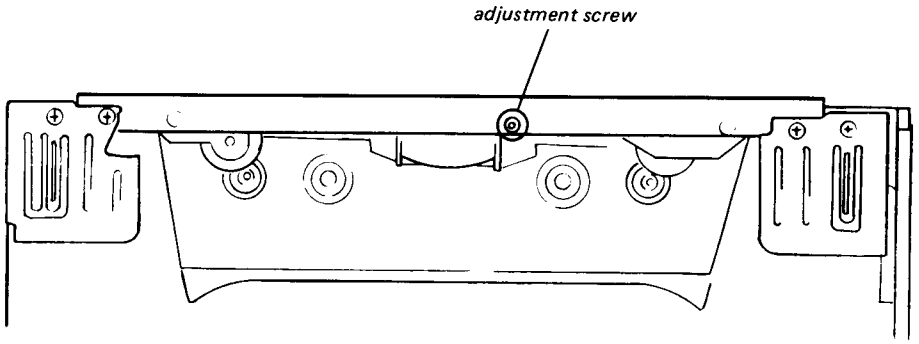
Adjustment should be made in both directions of FWD and REV.
Adjustment screws should be stopped by turning in the clockwise direction.
After the adjustment, lock the screws with locking compound.

3. Phase Check





Adjustment Location:



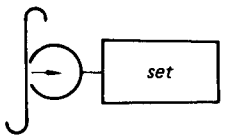
Playback Level Adjustment

DOLBY NR switch . . . . . OFF
VOL knob . . . . . MINIMUM

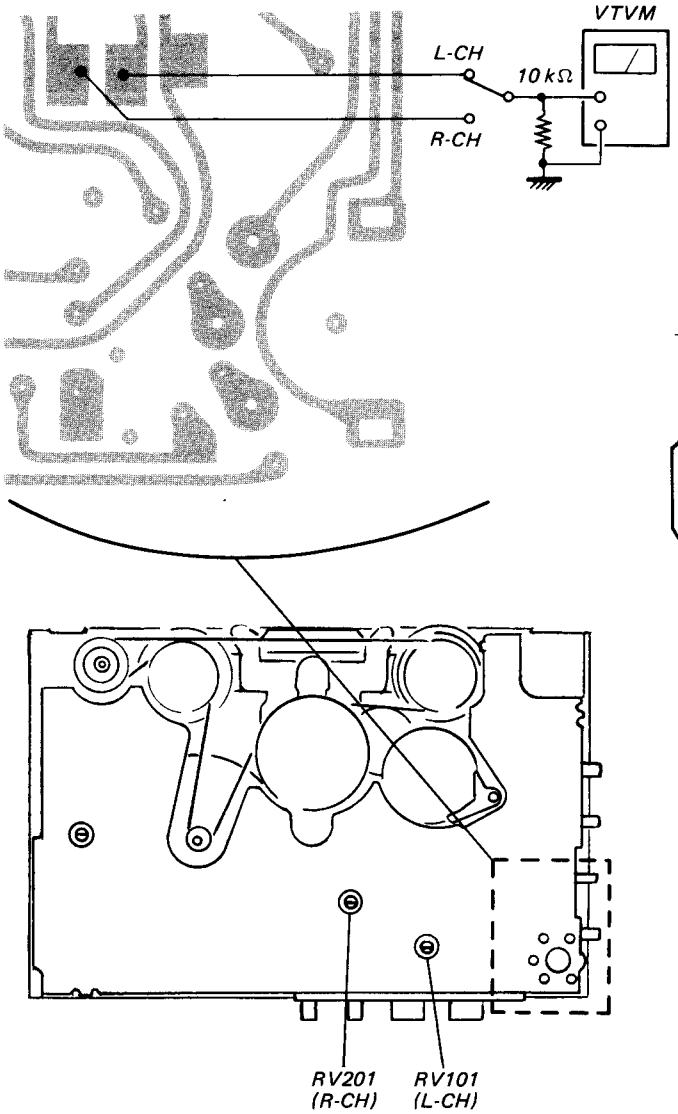
Procedure:

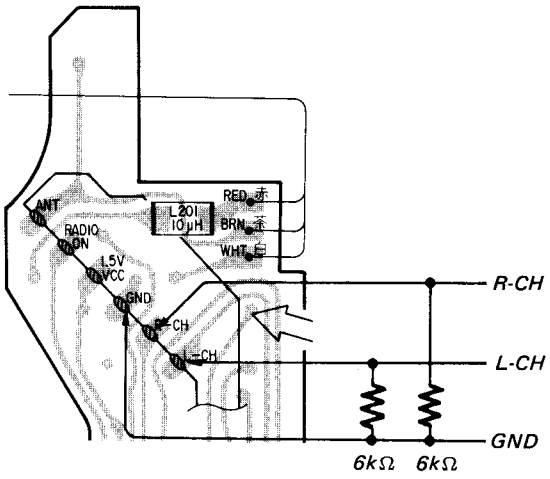
1. Playback mode

test tape
P-4-L300
(315 Hz, 0 dB)



2. Adjust RV101 (L-CH), R201 (R-CH) so that the VTVM reading is -20.5 ±1.0 dB (0.082 V – 0.065 V).



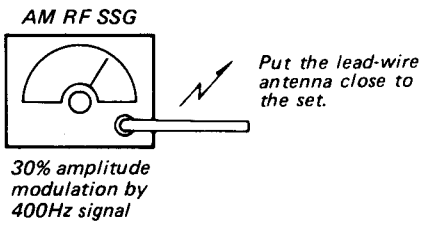


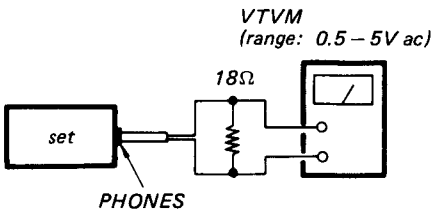
Note: Connect a 6kΩ load resistor when making the adjustment with the radio-flexible board removed.

AM Section

Setting:

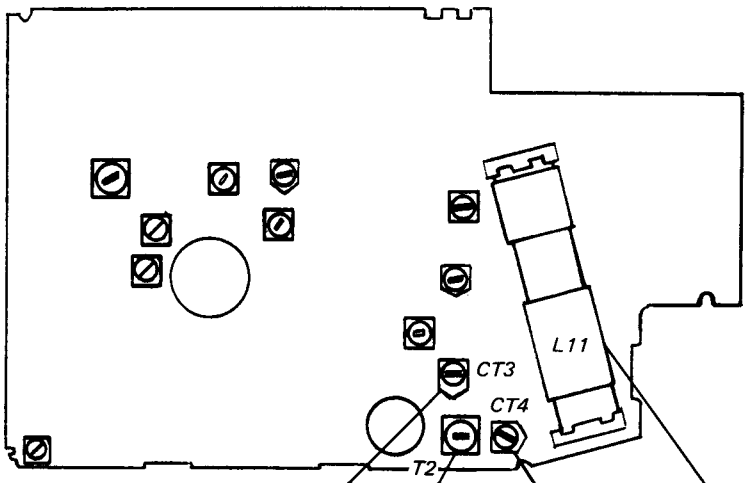
FUNCTION SW: RADIO, DX
BAND SW: AM





- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

[RADIO BOARD]



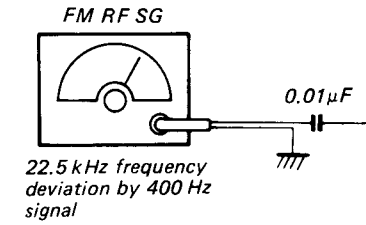
CT3	T2
1,680 kHz	515 kHz
Adjust for a maximum reading on VTVM.	
AM FREQUENCY COVERAGE ADJUSTMENT	

CT4	L11
1,400 kHz	620 kHz
Adjust for a maximum reading on VTVM.	
AM TRACKING ADJUSTMENT	

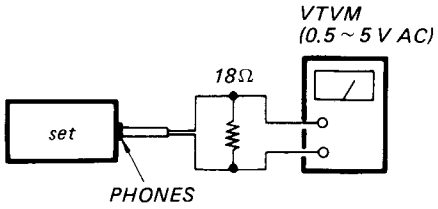
FM Section

Setting:

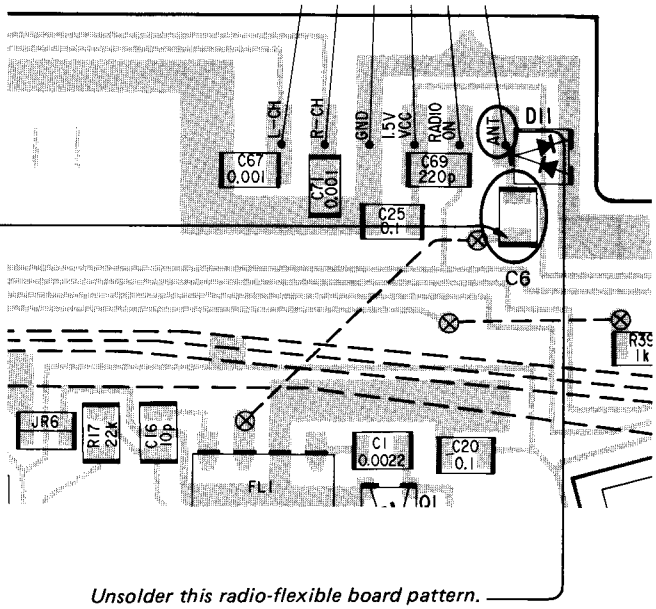
FUNCTION switch: RADIO, DX
BAND switch: FM



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.



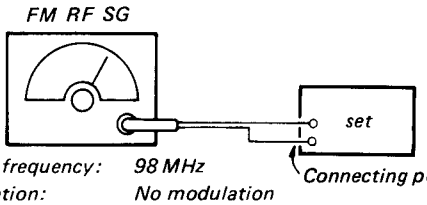
[RADIO BOARD]



RV1

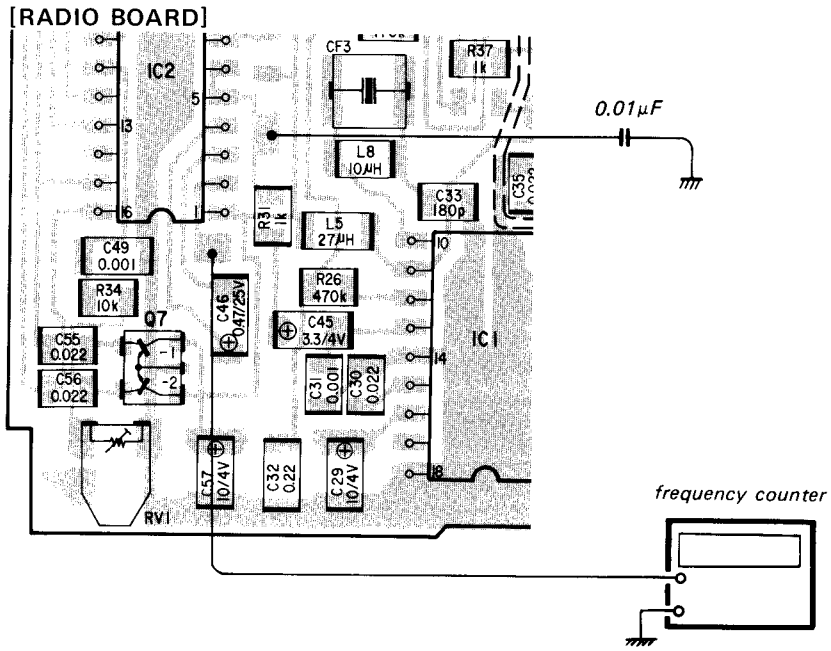
VCO Adjustment

Procedure:



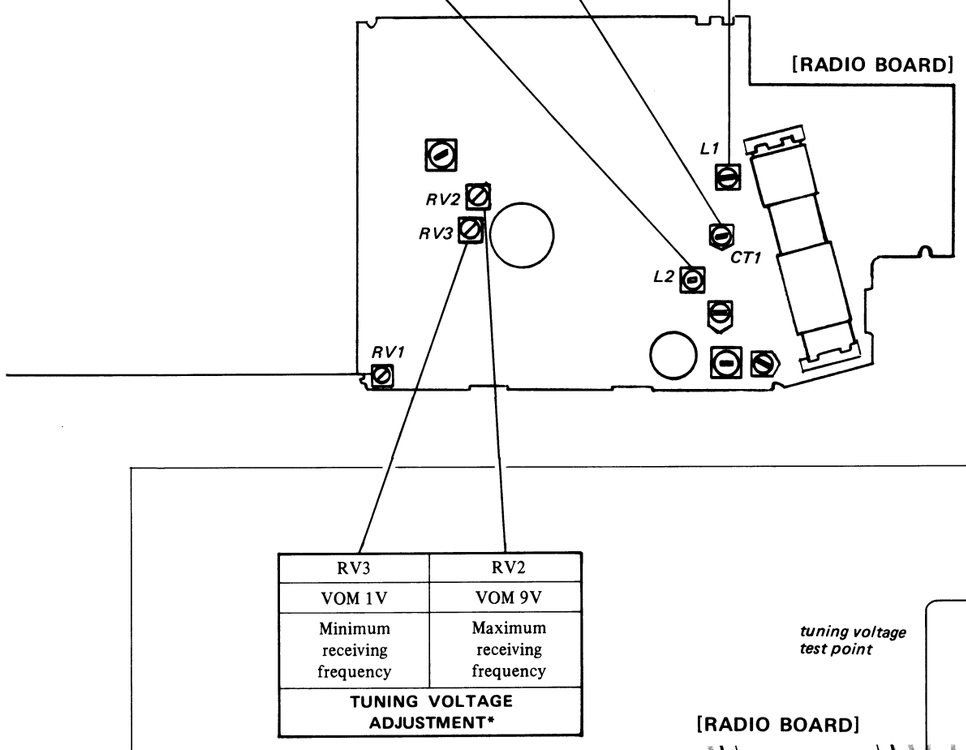
1. Tune the set to 98 MHz.
2. Adjust RV1 for 19 kHz ±20 Hz reading on the frequency counter.

[RADIO BOARD]



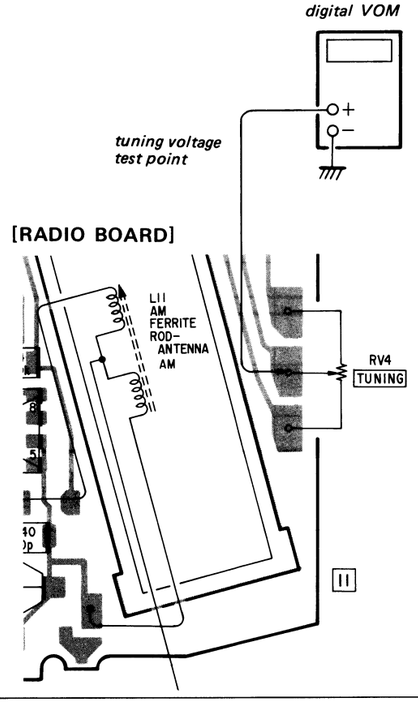
FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum VTVM reading.	
86.5 MHz	109.5 MHz
L2	CT1

FM TRACKING ADJUSTMENT	
Adjust for a maximum VTVM reading.	
L1	86.5 MHz

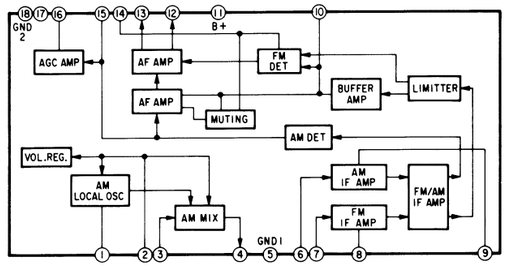


RV3	RV2
VOM 1V	VOM 9V
Minimum receiving frequency	Maximum receiving frequency
TUNING VOLTAGE ADJUSTMENT*	

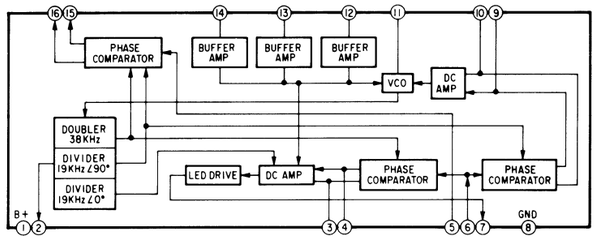
*FM frequency coverage adjustment and the tracking adjustment should be performed after the tuning voltage adjustment.



● IC1 CX10053B



● IC2 CX10054



Note for SCHEMATIC DIAGRAM (Radio Section):

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ——— : B+ bus.
- ▭ : adjustment for repair.
- Total current is measured with no cassette installed.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
  (( )) : FM
  < > : AM
- Voltage variations may be noted due to normal production tolerances.
- Power voltage is 1,5V and fed with regulated dc power supply from BATTERY TERMINAL.
  Voltages are dc with respect to ground in STOP mode.
  Voltage variations may be noted due to normal production tolerances.
- Switches

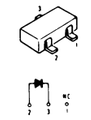
Ref. No.	Switch	Position
S1	FUNCTION	FM STEREO (RADIO, DX)
S2	BAND	FM

Note for MOUNTING DIAGRAM (Radio Section):

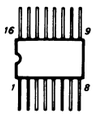
- ●— : parts extracted from the conductor side.
- [·]→ : indicates side identified with part number.
- ⊗ : Through hole.

● Semiconductor Lead Layouts

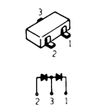
RD10M-B2



CX10054

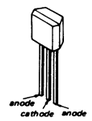


1SS123

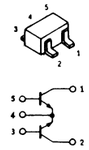


2SC2714Y
2SB624-BV4
2SC2712
2SD596
2SA812
2SC2757
2SC2223

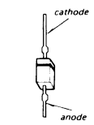
SVC203



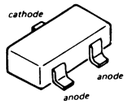
FMG4
FMW1



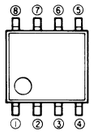
1SS283



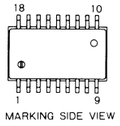
1S2837



KV1260M



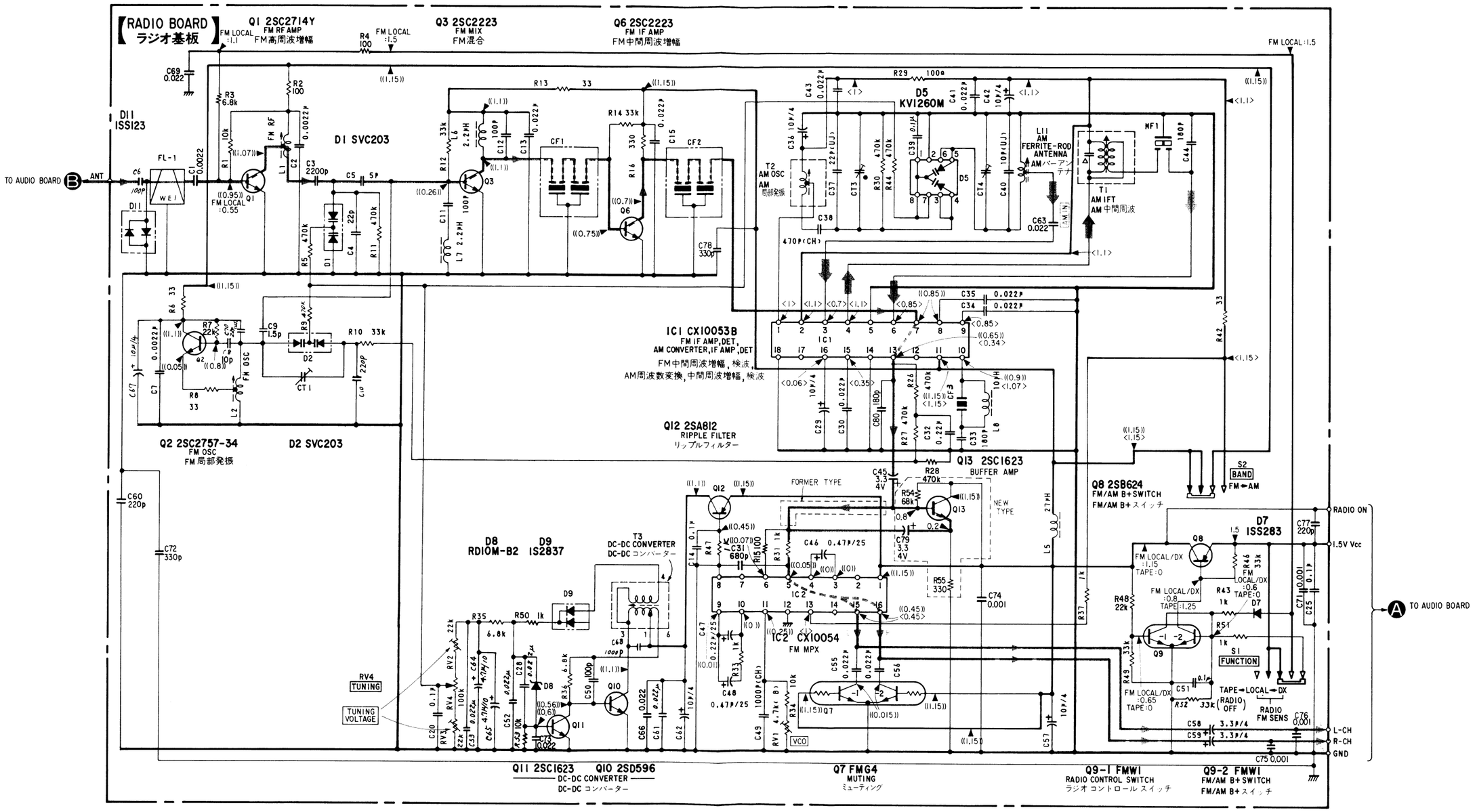
CX10053B



4-1. SCHEMATIC DIAGRAM

● See page 20 for Note.

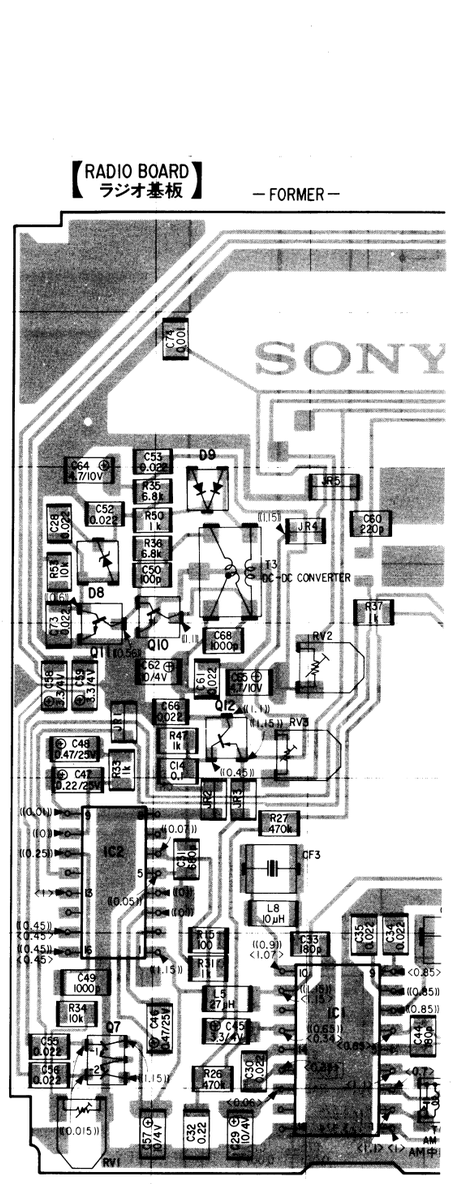
– Radio Section –

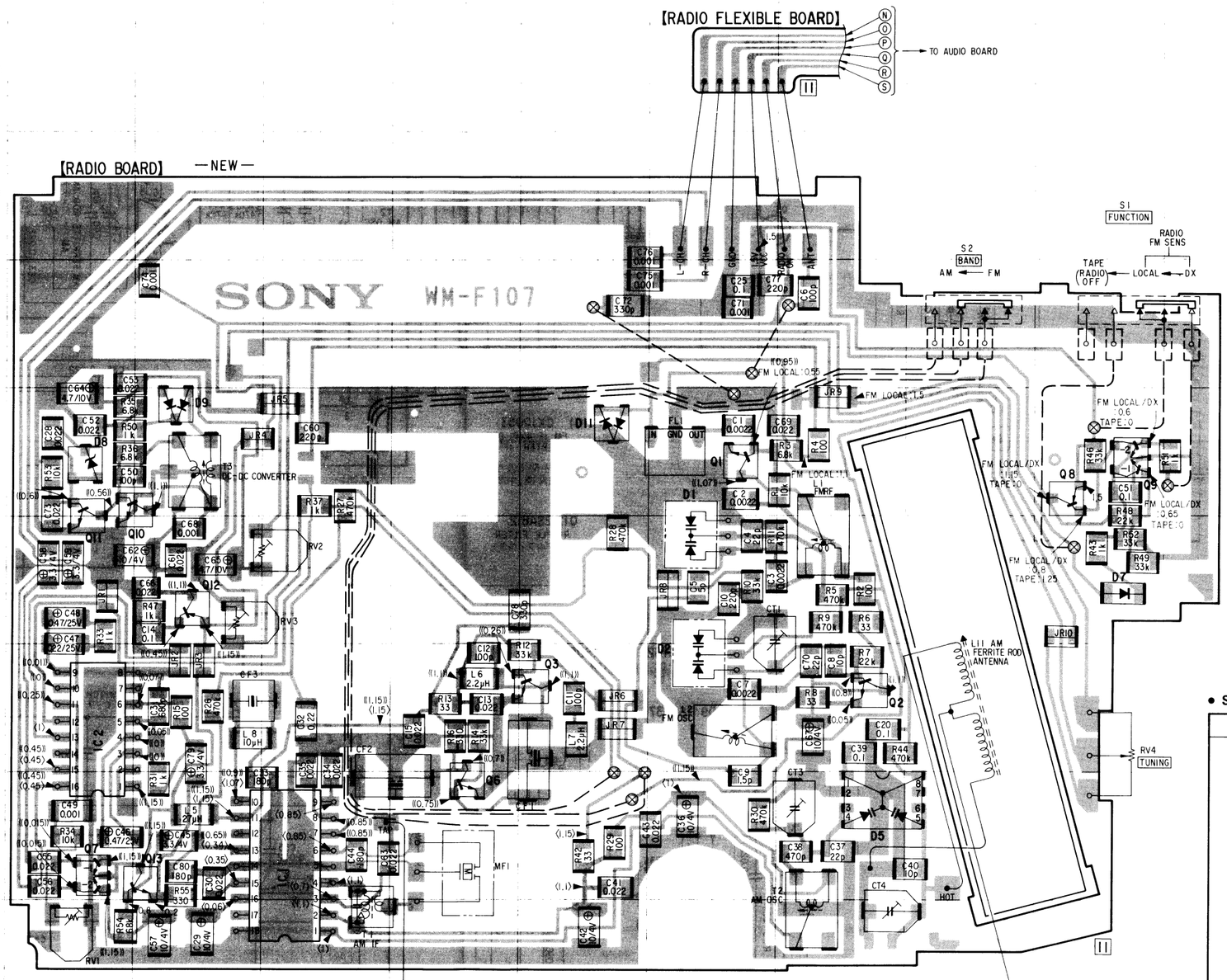


4-2. MOUNTING DIAGRAM

– Radio Section –

• See page 20 for Semiconductor Lead Layout, IC Block Diagram and Note.





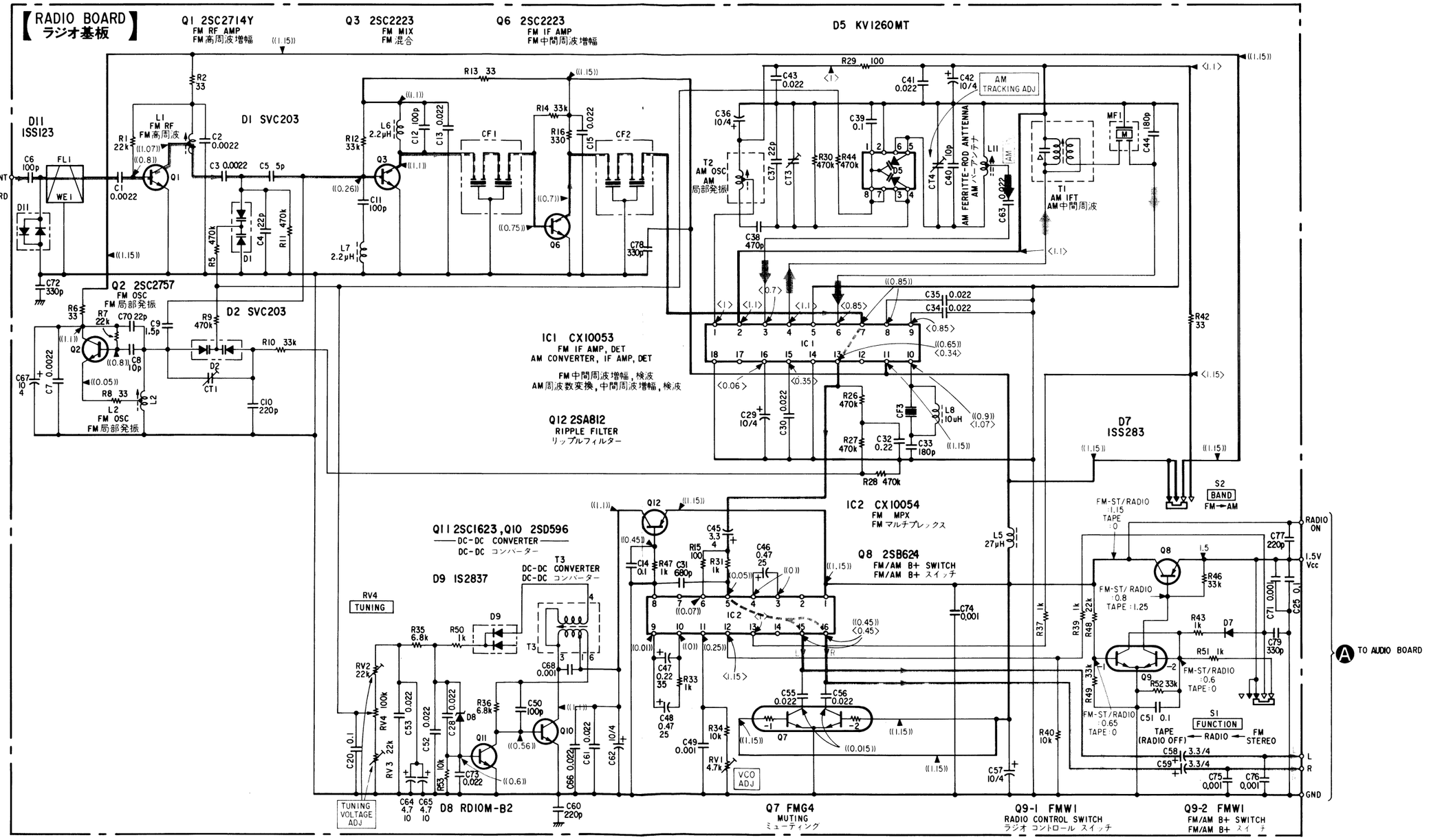
• **Semiconductors Location**

Ref. No.	Location
D1	D-6
D2	F-6
D5	G-7
D7	E-9
D8	D-1
D9	D-2
D11	D-5
IC1	G-3
IC2	F-1
Q1	D-6
Q2	F-7
Q3	F-5
Q6	G-4
Q7	G-1
Q8	D-9
Q9	D-9
Q10	E-2
Q11	E-1
Q12	E-2
Q13	G-2

4-3. SCHEMATIC DIAGRAM

● See page 20 for Note.

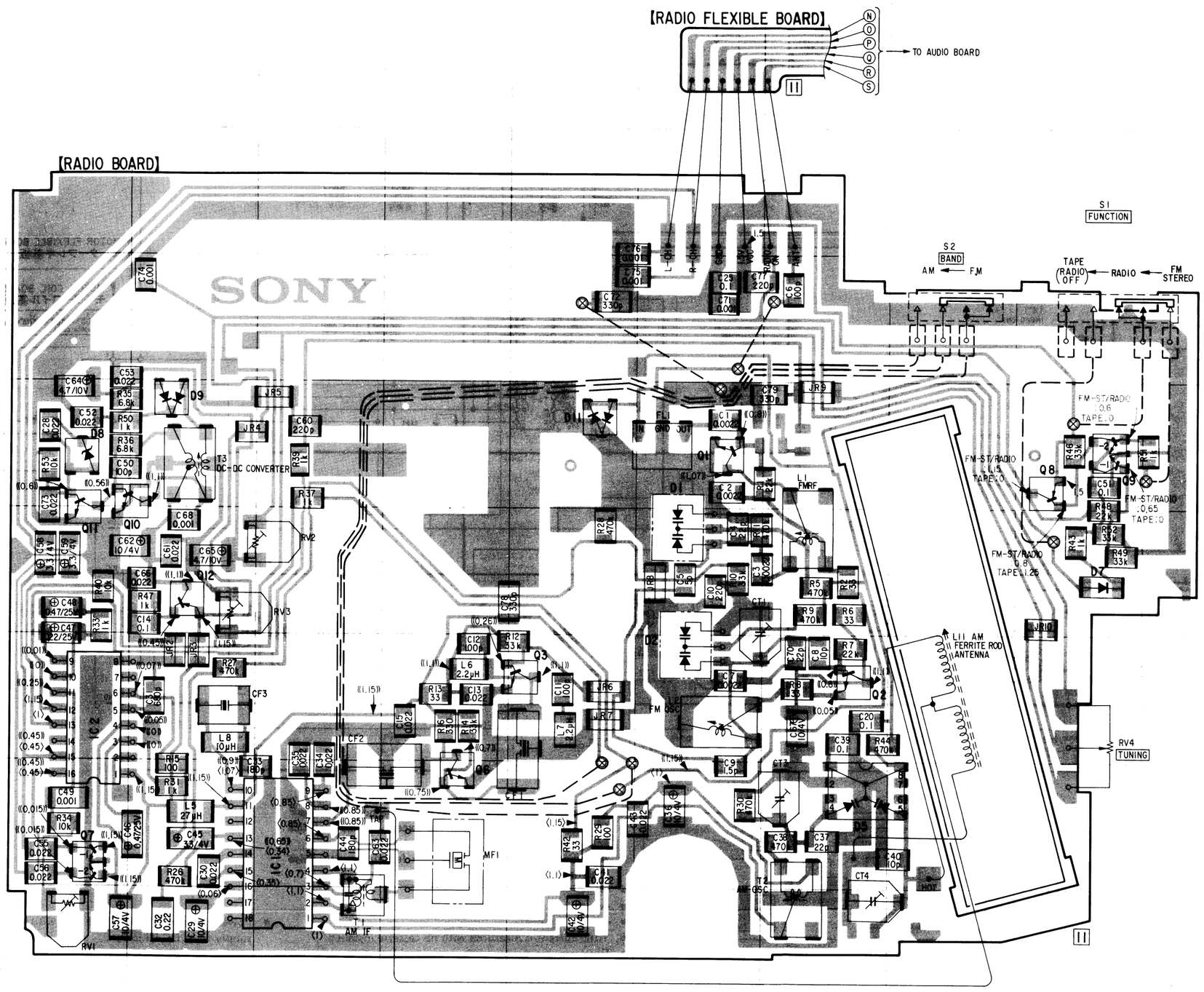
– Radio Section –



4-4. MOUNTING DIAGRAM

– Radio Section –

• See page 20 for Semiconductor Lead Layout, IC Block Diagram and Note.

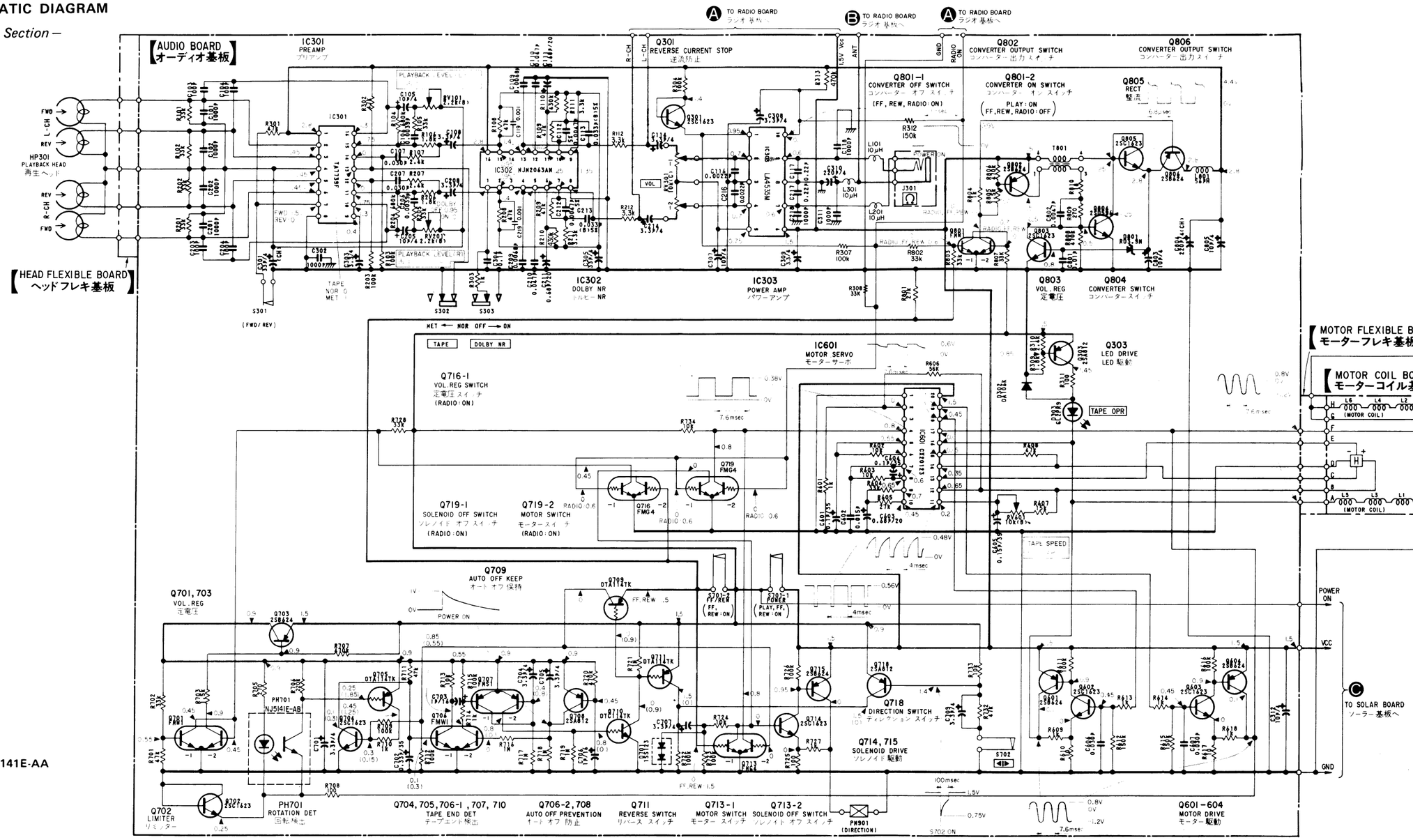


• **Semiconductors Location**

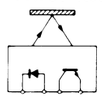
Ref. No.	Location
D1	D-6
D2	F-6
D5	G-7
D7	E-9
D8	D-1
D9	D-2
D11	D-5
IC1	G-3
IC2	F-1
Q1	D-6
Q2	F-7
Q3	F-5
Q6	G-4
Q7	G-1
Q8	D-9
Q9	D-9
Q10	E-2
Q11	E-1
Q12	E-2

4-5. SCHEMATIC DIAGRAM

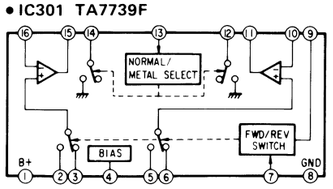
– Audio Section –



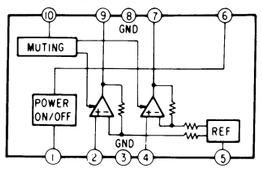
- **PH701 NJL5141E-AA**



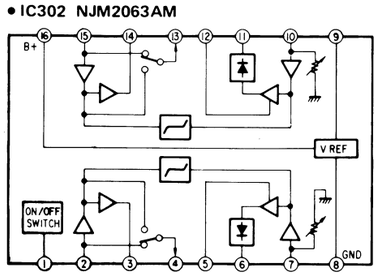
- **IC301 TA7739F**



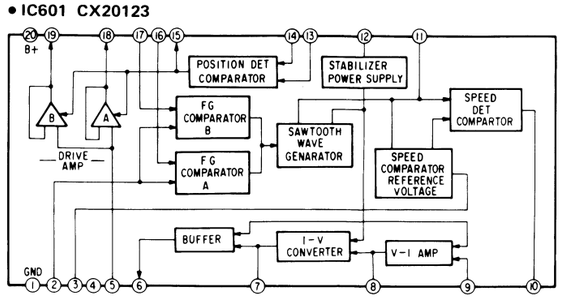
- **IC303 CX20089**



- **IC302 NJM2063AM**



- **IC601 CX20123**



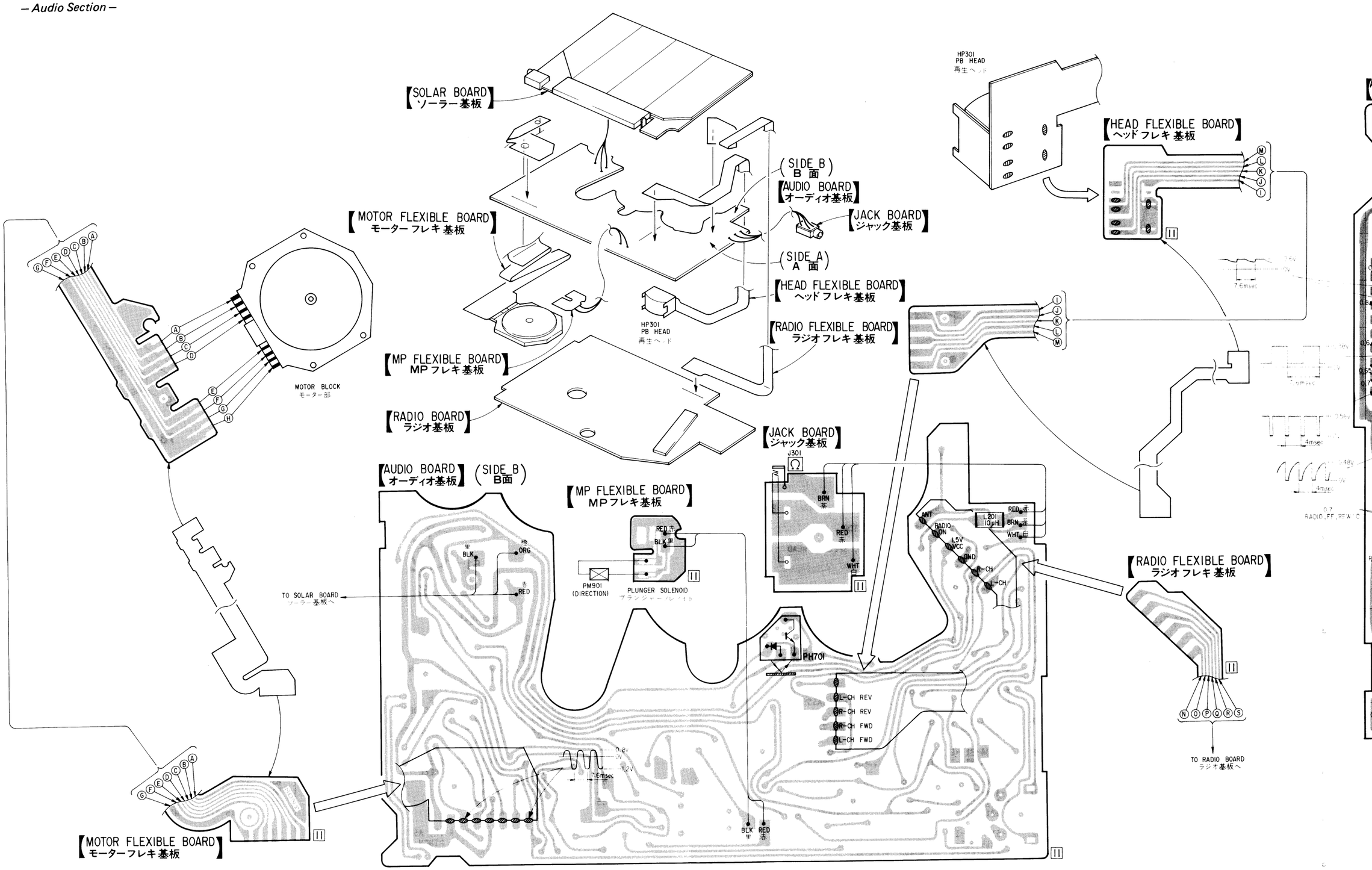
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- [illegible]
- [illegible]
- ——: B+ bus.
- Total current is measured with no cassette installed.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
  No mark: PLAY
  ( ) : When the square wave of 20 Hz, 0 dB (0.775 V) is applied to collector of Photo transistor (PH701).
- Power voltage is 1.5 V and fed with stabilized power supply from DC IN jack.
  Voltages are dc with respect to ground in STOP mode.
- Waveforms are taken to ground in no-signal mode by using oscilloscope.
  Voltage variations may be noted due to normal production tolerances.

4-6. MOUNTING DIAGRAM

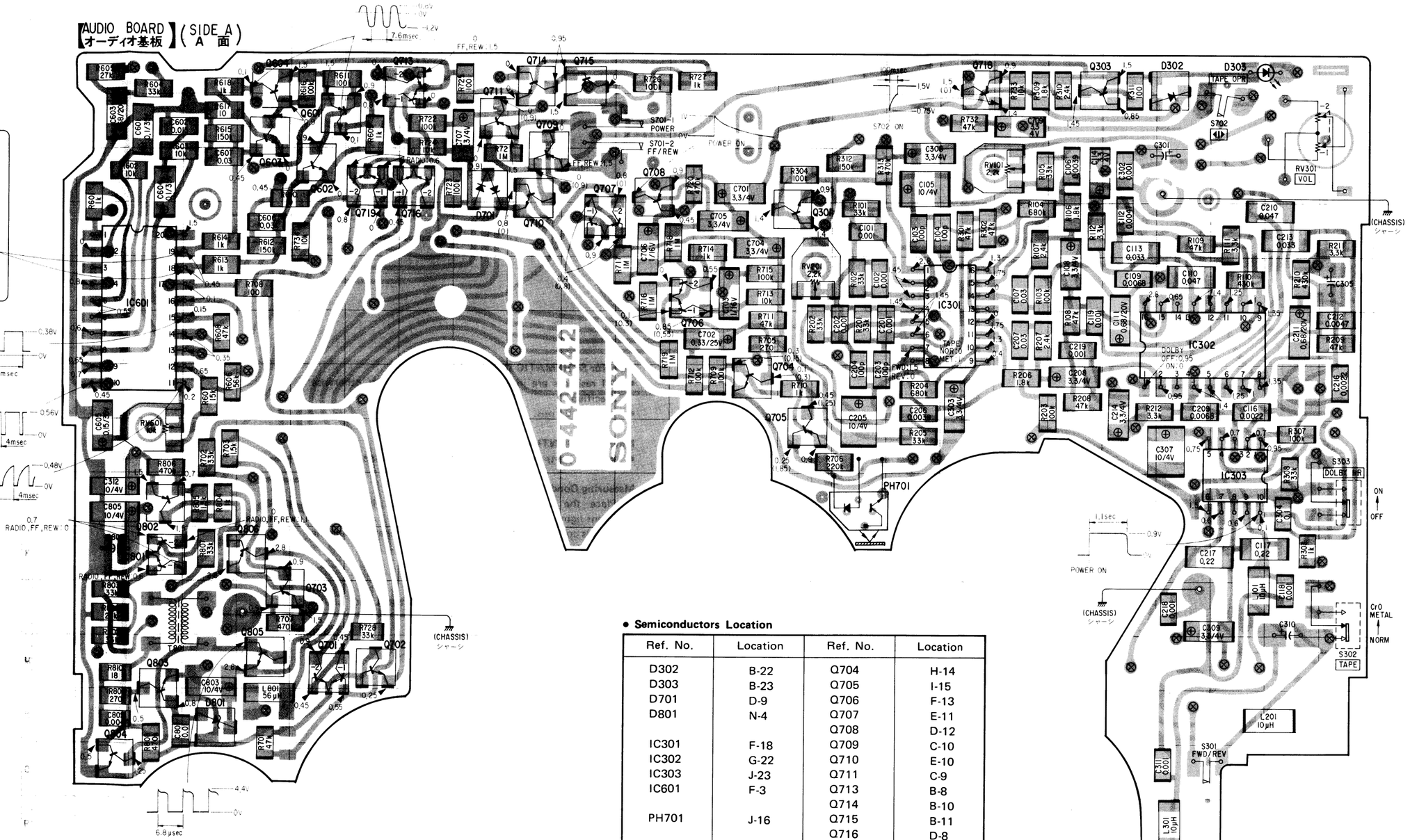
● See page 20 for Semiconductor Lead Layouts.

– Audio Section –



Note:

- ●— : parts extracted from the component side.
- ● ⊗ : Through hole.



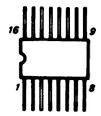
● **Semiconductors Location**

Ref. No.	Location	Ref. No.	Location
D302	B-22	Q704	H-14
D303	B-23	Q705	I-15
D701	D-9	Q706	F-13
D801	N-4	Q707	E-11
		Q708	D-12
IC301	F-18	Q709	C-10
IC302	G-22	Q710	E-10
IC303	J-23	Q711	C-9
IC601	F-3	Q713	B-8
		Q714	B-10
PH701	J-16	Q715	B-11
		Q716	D-8
Q301	E-15	Q718	B-18
Q303	B-20	Q719	D-7
Q601	C-6	Q801	K-3
Q602	D-6	Q802	J-3
Q603	C-5	Q803	M-3
Q604	B-5	Q804	O-2
Q701	M-6	Q805	M-5
Q702	M-7	Q806	K-5
Q703	L-6		

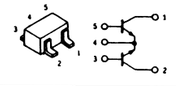
● **Semiconductor Lead Layouts**

2SA812
2SB624-BV4
2SD596
DTA114TK
DTC114TK
2SC2712

TA7739F

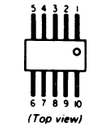


FMG4
FMS1
FMW1



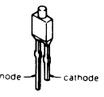
1SS123

LA4535M

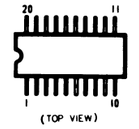


(Top view)

GL2PR9

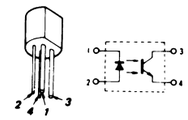


CX20123

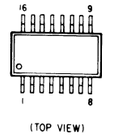


(TOP VIEW)

NJL5141E-AB

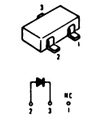


NJM2063AM



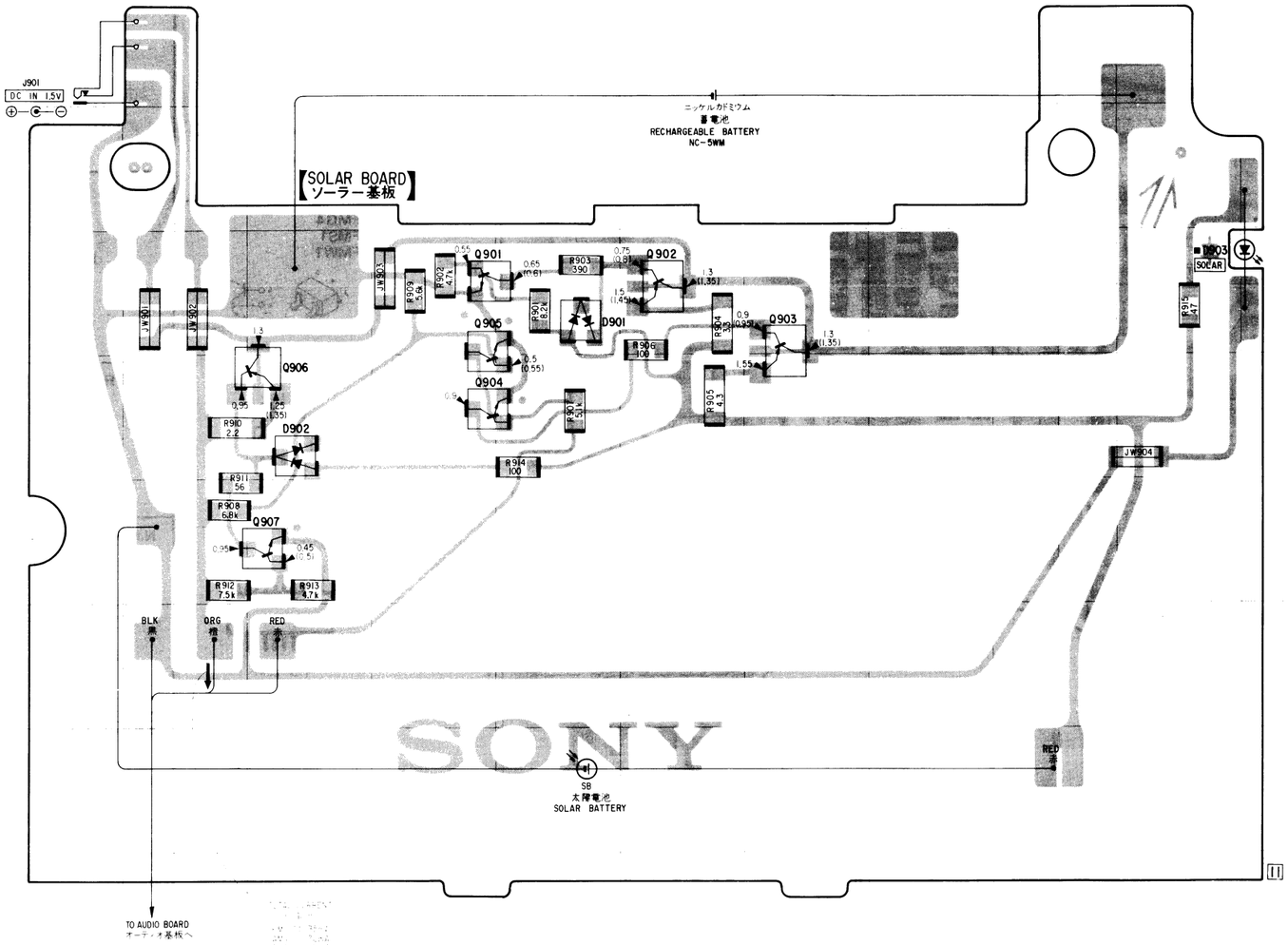
(TOP VIEW)

DA106K
RD3.9M-B2



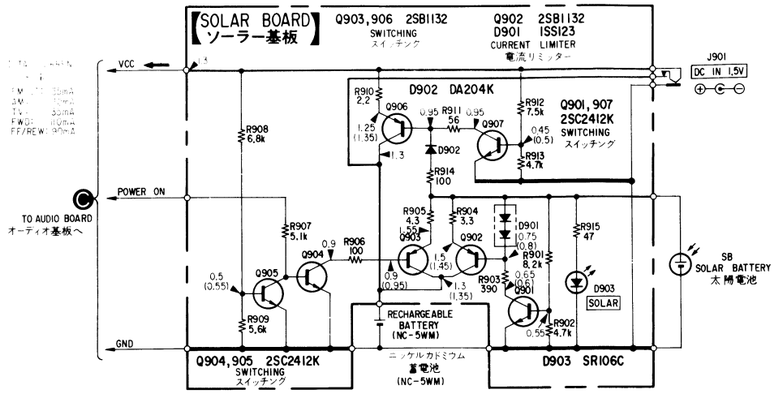
4-7. MOUNTING DIAGRAM

– Solar Section –



4-8. SCHEMATIC DIAGRAM

– Solar Section –



Note for SCHEMATIC DIAGRAM

- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ——— : B+ bus.

Note for MOUNTING DIAGRAM

- •— : parts extracted from the conductor side.

Measuring Condition

Place the unit at 100 mm away from light source (filament light; 100V/100W).

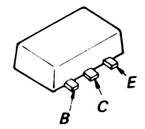
In this condition, the solar cell is normal when 2V reading is obtained with the solar cell alone.

• Semiconductors Location

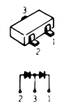
Ref. No.	Location
D901	C-5
D902	D-3
D903	C-10
Q901	C-4
Q902	C-6
Q903	C-7
Q904	D-4
Q905	C-4
Q906	D-3
Q907	E-3

• Semiconductor Lead Layouts

2SB798



DA204K
1SS123



2SC1623

SR106C

NOTE:
· The mechanical number in the e supplied.

5-1.

5-
35-

No.	Part No
1	3-334-8
2	3-334-8
3	*3-334-8
4	3-334-8
5	*3-326-1
6	*3-334-8
7	3-326-1
8	3-334-8
9	3-326-5
10	3-334-8
11	3-326-1
12	3-334-8
	3-334-8
13	3-334-8
	3-334-8
14	3-334-8
15	3-326-5
16	*X-3334-
17	3-334-8
18	X-3334-
19	3-334-8
20	X-3334-
21	3-703-9
22	*3-701-9
23	3-703-9
24	3-334-8
25	3-334-8
26	3-326-5
27	3-326-5
28	*3-334-8
29	3-334-8
30	3-334-8
31	3-334-8

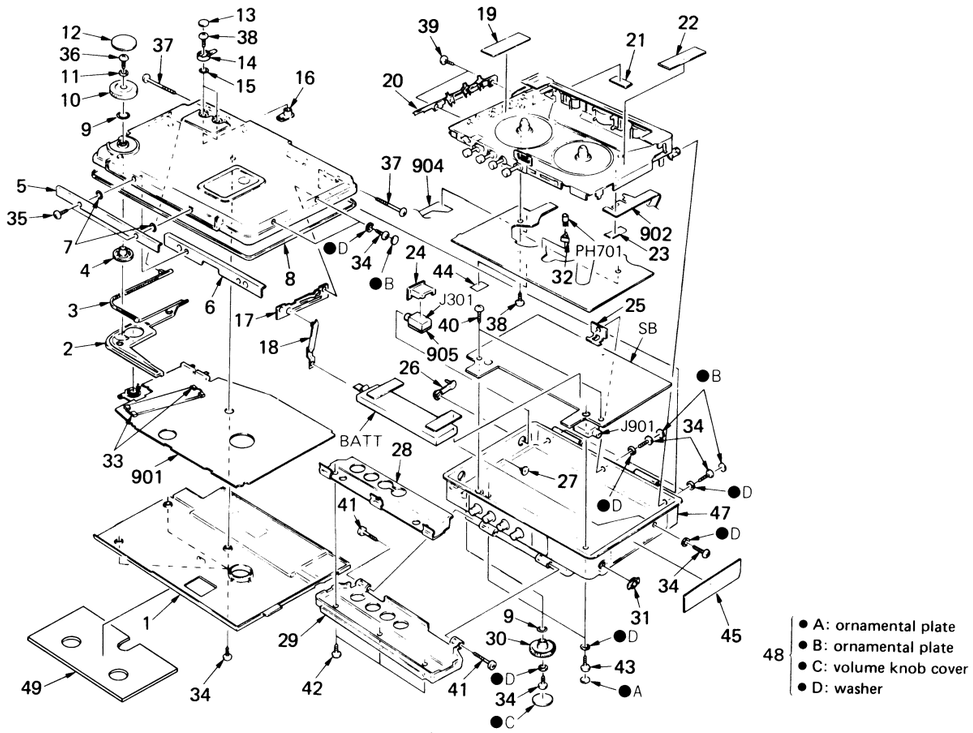
SECTION 5
EXPLODED VIEWS AND PARTS LIST

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

J901 DC IN 1.5V

SB SOLAR BATTERY 太陽電池

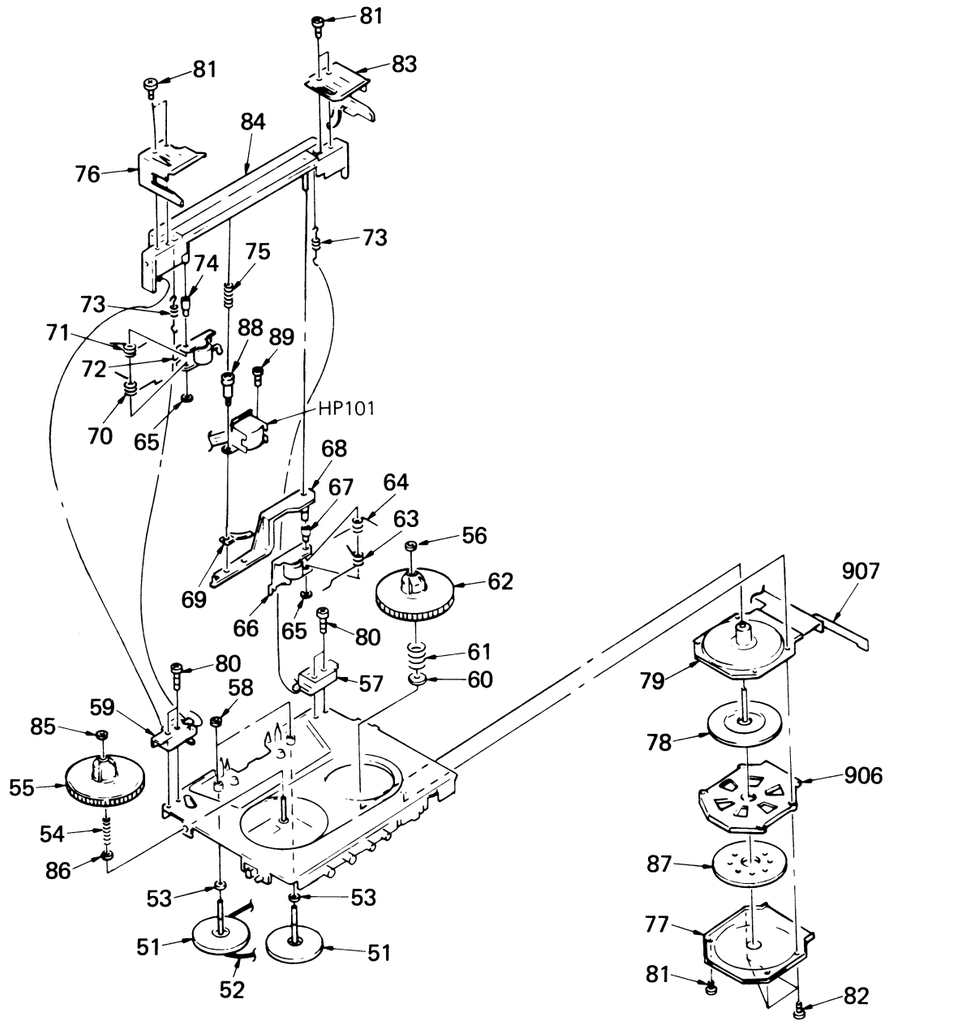
5-1.



No.	Part No.	Description	Remarks
1	3-334-840-01	PLATE, ORNAMENTAL, TU	
2	3-334-838-01	RACK, POINTER	
3	*3-334-842-01	GUIDE, POINTER	
4	3-334-817-01	GEAR, JOINT, TU	
5	*3-326-121-01	RETAINER (A)	
6	*3-334-816-01	RETAINER (B)	
7	3-326-149-01	PACKING (B)	
8	3-334-815-01	PACKING, CABINET	
9	3-326-573-01	RING (DIA.4.9X DIA.7.1), O	
10	3-334-836-01	KNOB, TUNING	
11	3-326-135-01	WASHER	
12	3-334-820-01	(WHITE).....ORNAMENT, KNOB, TU	
	3-334-820-11	(YELLOW)....ORNAMENT, KNOB, TU	
13	3-334-814-01	(WHITE).....ORNAMENT, SELECTION KNOB (A)	
	3-334-814-11	(YELLOW)....ORNAMENT, SELECTION KNOB (A)	
14	3-334-813-01	KNOB (A), SELECTION	
15	3-326-560-02	RING (DIA. 2.5XDIA. 4.5), O	
16	*X-3334-802-1	LEVER ASSY, SELECTION	
17	3-334-839-01	PLATE (C), CLICK	
18	X-3334-801-1	PLATE ASSY, CLICK	
19	3-334-822-01	PLATE, INDICATION, KNOB	
20	X-3334-803-1	KNOB ASSY, SELECTION	
21	3-703-929-01	SPACER, SWITCH	
22	*3-701-999-00	LABEL, SERIAL NUMBER	
23	3-703-929-01	SHEET, INSULATING	
24	3-334-835-01	GUIDE, HP JACK	
25	3-334-818-01	BRACKET, S	
26	3-326-520-01	PACKING, HP JACK	
27	3-326-519-01	WINDOW, LED	
28	*3-334-834-01	BRACKET, BUCKLE	
29	3-334-841-01	BUCKLE	
30	3-334-837-01	KNOB, VOLUME	
31	3-334-812-01	PACKING, DC JACK	

No.	Part No.	Description	Remarks
32	3-329-761-01	ADJUSTOR, REFLECTOR	
33	3-329-748-01	HOLDER, ANTENNA	
34	3-703-816-71	SCREW (M1.4X3.0), SPECIAL HEAD	
35	3-326-145-21	SCREW (M1.7X6.8)	
36	3-703-502-31	SCREW	
37	3-326-536-11	SCREW, TAPPING	
38	3-703-816-42	SCREW (M1.4X2.5), SPECIAL HEAD	
39	7-627-850-37	SCREW, PRECISION +P 1.4X1.4	
40	4-887-321-11	SCREW (B1.7)(G), TAPPING	
41	3-334-819-01	SCREW, TAPPING	
42	3-326-146-11	SCREW (M1.4X2.5)	
43	3-703-816-81	SCREW (M1.4X6.0), SPECIAL HEAD	
44	3-485-343-11	CUSHION, CABINET UPPER 10X7X0.3	
45	3-334-873-01	(US,Canadian)...LABEL, MODEL NUMBER (U)	
46	X-3334-821-1	(YELLOW).....CABINET CASSETTE	
	X-3334-822-1	(WHITE).....CABINET CASSETTE	
47	X-3334-819-1	(WHITE).....CABINET CONTROL	
	X-3334-820-1	(YELLOW).....CABINET CONTROL	
48	X-3334-813-1	(WHITE).....PLATE, ORNAMENTAL	
	X-3334-814-1	(YELLOW).....PLATE, ORNAMENTAL	
49	3-334-936-00	SHEET BLIND, TU	
50	3-334-864-01	WASHER	
901	A-3216-009-A	(US,Canadian)...PC BOARD ASSY, TU	
	A-3216-024-A	(AEP,UK,E).....PC BOARD ASSY, TU	
902	1-619-146-11	PC BOARD, FLEXIBLE	
903	A-3215-986-A	PC BOARD ASSY, AUDIO	
904	1-619-145-11	PC BOARD, FLEXIBLE	
905	*1-619-144-11	PC BOARD, HEADPHONE	
BATT	1-528-189-11	BATTERY, NICKEL CADMIUM	
J301	1-563-298-11	JACK (SMALL TYPE) (DIA. 3.5)	
J901	1-563-299-11	JACK, EXTERNAL POWER	
PH701	8-719-751-43	DIODE NJL5141E-AB	
SB	1-528-190-12	BATTERY	

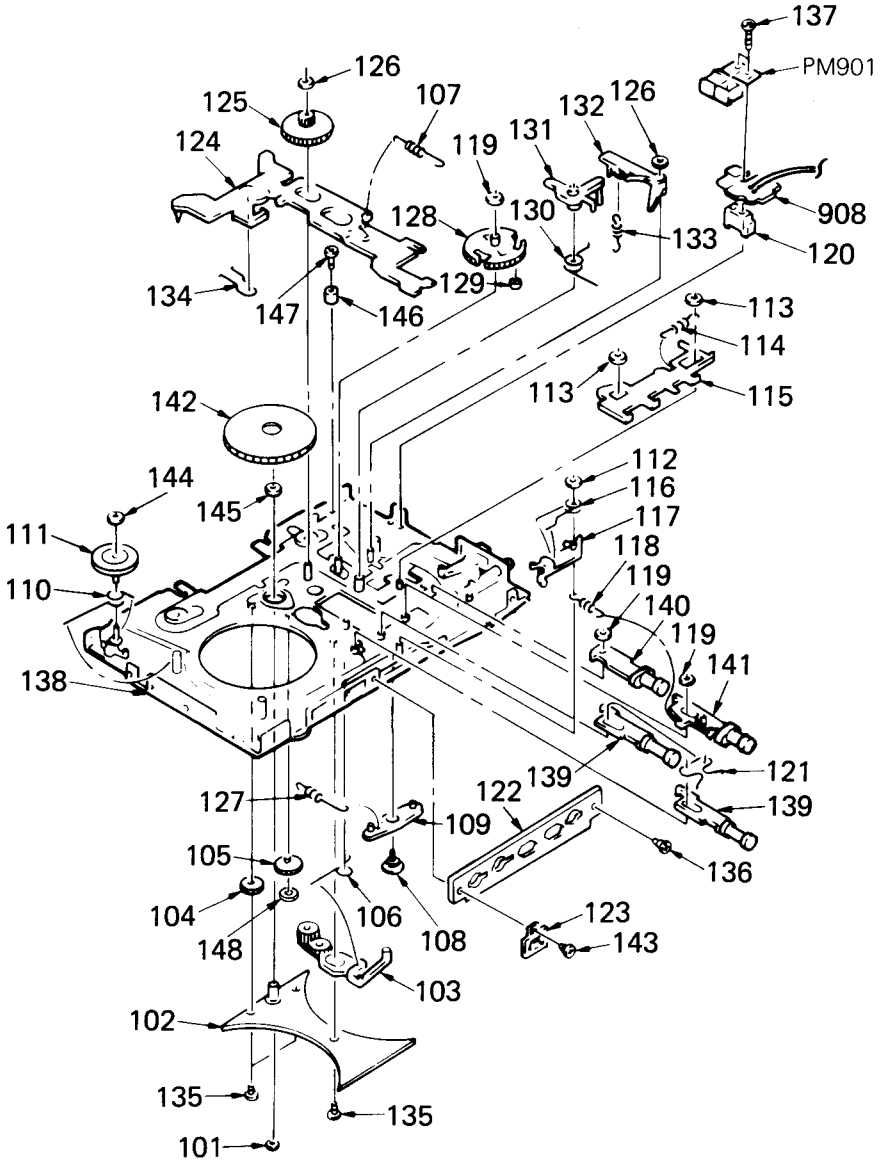
5-2.



No.	Part No.	Description	Remarks
51	X-3329-670-1	FLYWHEEL ASSY (N)	
52	3-329-695-01	BELT	
53	3-321-394-21	WASHER	
54	3-331-013-01	SPRING, COMPRESSION	
55	X-3329-624-1	GEAR ASSY, T REEL	
56	3-315-384-11	WASHER, STOPPER	
57	3-329-737-01	GUIDE (LEFT), HOLDER	
58	3-331-007-01	WASHER	
59	3-329-736-01	GUIDE (RIGHT), HOLDER	
60	3-320-354-01	WASHER	
61	3-331-014-01	SPRING, COMPRESSION	
62	3-329-729-01	GEAR, SUPPLY REEL	
63	3-329-641-01	SPRING (R)	
64	3-329-643-01	SPRING (R)	
65	3-331-036-01	WASHER	
	3-331-036-11	WASHER	
66	X-3329-602-1	PINCH LEVER (R) ASSY	
67	3-331-027-01	COLLAR (R), PINCH LEVER	
68	3-329-710-01	LEVER, HEAD	
69	3-329-644-01	SPRING	
70	3-329-640-01	SPRING (N)	

No.	Part No.	Description	Remarks
71	3-329-642-01	SPRING (N)	
72	X-3329-601-1	PINCH LEVER (N) ASSY	
73	3-331-012-01	SPRING (HOLDER), TENSION	
74	3-329-637-01	COLLAR, PINCH LEVER	
75	3-331-038-01	SPRING, COMPRESSION	
76	3-329-714-01	HOLDER (RIGHT), CASSETTE	
77	3-329-648-01	PLATE, SHIELD, MOTOR	
78	A-3133-236-A	WHEEL BLOCK ASSY, MOTOR	
79	X-3329-625-1	CHASSIS ASSY, MOTOR	
80	7-627-552-48	SCREW, PRECISION +P 1.7X4	
81	7-627-551-98	PRECISION SCREW +P 1.4X2.2	
82	3-703-816-91	SCREW (M1.4X2.8), SPECIAL HEAD	
83	X-3334-809-1	HOLDER (L) ASSY, CASSETTE	
84	X-3329-644-1	HOLDER (T) ASSY	
85	3-578-242-21	WASHER	
86	3-315-415-21	WASHER (1.5-2.3)	
87	3-333-173-01	PLATE (S), HYSTERESIS	
88	3-331-082-01	SCREW, HD	
89	3-331-076-01	SCREW, AZIMUTH	
906	1-462-230-11	COIL, MOTOR (STATOR)	
907	1-619-146-11	PC BOARD, FLEXIBLE	
HP101	1-543-310-11	HEAD, MAGNETIC (PLAYBACK)	

5-3.



No.	Part No.	Description	Remarks
101	3-331-007-01	WASHER	
102	X-3329-618-1	COVER ASSY, REEL	
103	X-3329-626-1	LEVER (B) ASSY, F.R	
104	3-329-689-01	GEAR (B), T	
105	3-329-688-01	GEAR (A), T	
106	3-329-699-01	SPRING	
107	3-331-017-01	SPRING, TENSION	
108	3-331-056-01	SHAFT, DRIVING LEVER (B)	
109	X-3329-617-1	LEVER (B) ASSY, DRIVING	
110	3-329-701-01	SPRING	
111	3-329-686-01	WHEEL, REVERSE	
112	3-331-036-11	WASHER	
113	3-578-224-00	WASHER	
114	3-331-009-01	SPRING (LOCK LEVER), TENSION	
115	3-329-731-01	LEVER, LOCK	
116	3-329-702-01	SPRING	
117	3-329-692-05	LEVER, SW	
118	3-331-010-01	SPRING (STOP LEVER), TENSION	
119	3-578-242-21	WASHER	
120	*3-331-041-01	BRACKET, P	
121	3-331-016-01	SPRING	
122	*3-329-734-01	HOLDER, BUTTON	
123	3-334-863-01	SPRING	
124	X-3329-616-1	LEVER (A) ASSY, DRIVING	
125	3-329-687-01	GEAR, DRIVING	

No.	Part No.	Description	Remarks
126	3-315-384-11	WASHER, STOPPER	
127	3-331-018-01	SPRING, TENSION	
128	3-329-730-01	GEAR, CAM	
129	3-329-693-01	COLLAR, CAM GEAR	
130	3-329-700-01	SPRING	
131	3-329-733-01	LEVER (A), SHUT-OFF	
132	X-3329-615-1	LEVER ASSY, TRIGGER	
133	3-331-011-01	SPRING (TRIGGER LEVER), TENSION	
134	3-329-698-01	SPRING (B)	
135	3-331-047-01	SCREW (M1.4X1.4), SPECIAL HEAD	
136	3-703-816-31	SCREW (M1.4X1.6), SPECIAL HEAD	
137	7-627-551-37	SCREW, PRECISION +P 1.4X5	
138	X-3334-805-1	CHASSIS COMPLETE ASSY	
139	X-3334-808-1	LEVER (A) ASSY, F.R	
140	X-3334-806-1	LEVER ASSY, PLAY	
141	X-3334-807-1	LEVER ASSY, STOP	
142	X-3329-628-1	PULLEY COMPLETE ASSY, MIDWAY	
143	3-703-816-01	SCREW (M1.4X2.0), SPECIAL HEAD	
144	3-331-036-01	WASHER	
145	3-321-394-21	WASHER	
146	3-334-847-01	SELECTION COLLAR, NR	
147	3-331-008-01	SCREW (M1.4X1.1) (1), PRECISION	
908	1-617-019-11	PC BOARD, MP FLEXIBLE	
PM901	1-454-406-11	SOLENOID, PLUNGER	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
901	A-3216-009-A	(US,Canadian)...PC BOARD ASSY, TU		
	A-3216-024-A	(AEP,UK,E).....PC BOARD ASSY, TU		
902	1-619-146-11	PC BOARD, FLEXIBLE		
903	A-3215-986-A	PC BOARD ASSY, AUDIO		
904	1-619-145-11	PC BOARD, FLEXIBLE		
905	*1-619-144-11	PC BOARD, HEADPHONE		
906	1-462-230-11	COIL, MOTOR (STATOR)		
907	1-619-146-11	PC BOARD, FLEXIBLE		
908	1-617-019-11	PC BOARD, MP FLEXIBLE		
BATT	1-528-189-11	BATTERY, NICKEL CADMIUM		
C1	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C2	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C3	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C4	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C5	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C6	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C7	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C8	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C9	1-163-084-00	CERAMIC CHIP 1.5PF	0.25PF	50V
C10	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C11	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C12	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C13	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C14	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C15	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C20	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C25	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C28	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C29	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C30	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C31	1-163-137-00	CERAMIC CHIP 680PF	10%	50V
C32	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C33	1-163-257-00	CERAMIC CHIP 180PF	5%	50V
C34	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C35	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C36	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C37	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C38	1-163-267-00	CERAMIC CHIP 470PF	5%	50V
C39	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C40	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C41	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C42	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C43	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C44	1-163-257-00	CERAMIC CHIP 180PF	5%	50V
C45	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C46	1-135-083-00	TANTAL. CHIP 0.47MF	10%	25V

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
C47	1-135-072-21	TANTAL. CHIP 0.22MF	10%	35V
C48	1-135-083-00	TANTAL. CHIP 0.47MF	10%	25V
C49	1-163-335-11	CERAMIC CHIP 0.001MF	5%	50V
C50	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C51	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C52	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C53	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C55	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C56	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C57	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C58	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C59	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C60	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C61	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C62	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C63	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C64	1-135-096-21	TANTAL. CHIP 4.7MF	10%	10V
C65	1-135-096-21	TANTAL. CHIP 4.7MF	10%	10V
C66	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C67	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C68	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C69	1-163-033-00	(US,Canadian) ...CERAMIC CHIP 0.022MF	10%	25V
C70	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C71	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C72	1-163-041-00	CERAMIC CHIP 330PF	10%	50V
C74	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C75	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C76	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C77	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C78	1-163-041-00	CERAMIC CHIP 330PF	10%	50V
C79	1-163-129-00	(AEP,UK,E)...CARAMIC 330PF	10%	50V
C79	1-135-103-00	(US,Canadian NEW) ...TANTAL. CHIP 3.3MF	10%	4V
C101	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C102	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C103	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C104	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C105	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C106	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V
C107	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V
C108	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C109	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C110	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V
C111	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V
C112	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V
C113	1-163-074-00	CERAMIC CHIP 0.033MF	5%	25V
C114	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
C116	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C117	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C118	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C119	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C201	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C202	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C203	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C204	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C205	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C206	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V
C207	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V
C208	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C209	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C210	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V
C211	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V
C212	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V
C213	1-163-074-00	CERAMIC CHIP 0.033MF	5%	25V
C214	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C216	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C217	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C218	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C219	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C301	1-124-431-00	ELECT 33MF	20%	4V
C302	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C303	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C304	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C305	1-124-431-00	ELECT 33MF	20%	4V
C307	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C308	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C309	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C310	1-124-413-00	ELECT 220MF	20%	4V
C311	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C312	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C601	1-135-070-00	TANTAL. CHIP 0.1MF	10%	35V
C602	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V
C603	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V
C604	1-135-070-00	TANTAL. CHIP 0.1MF	10%	35V
C605	1-135-071-21	TANTAL. CHIP 0.15MF	10%	35V
C606	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V
C607	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V
C701	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C702	1-135-073-00	TANTAL. CHIP 0.33MF	10%	35V
C703	1-135-073-00	TANTAL. CHIP 0.33MF	10%	35V
C704	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C705	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C706	1-135-091-00	TANTAL. CHIP 1MF	10%	16V
C707	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C709	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C801	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C802	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C803	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
C804	1-124-413-00	ELECT 220MF	20%	4V
C805	1-135-104-00	TANTAL. CHIP 10MF	10%	4V
CF1	1-567-338-65	FILTER, CERAMIC		
CF2	1-567-338-65	FILTER, CERAMIC		
CF3	1-567-338-65	FILTER, CERAMIC		

ELECTRICAL PARTS

Ref.No.	Part No.	Description
CT1	1-141-333-11	CAP, VAR, TRIMMER
CT3	1-141-333-11	CAP, VAR, TRIMMER
CT4	1-141-333-11	CAP, VAR, TRIMMER
D1	8-719-908-57	DIODE SVC203
D2	8-719-908-57	DIODE SVC203
D5	8-719-928-03	DIODE KV1260M
D7	8-719-118-21	DIODE 1SS283
D8	8-719-106-53	DIODE RD10M-B2
D9	8-719-100-05	DIODE 1S2837
D11	8-719-101-23	DIODE 1SS123
D302	8-719-908-30	DIODE DA106K
D303	1-807-305-11	DIODE GL2PR9 (LED)
D701	8-719-101-23	DIODE 1SS123
D801	8-719-105-58	DIODE RD3.9M-B2
D901	8-719-101-23	DIODE 1SS123
D902	8-719-914-42	DIODE DA204K
D903	8-719-100-06	DIODE SR106C (LED)
FL1	1-235-279-00	FILTER, BAND PASS
HP101	1-543-310-11	HEAD, MAGNETIC (PLAYBACK)
IC1	8-759-923-96	IC CX10053B
IC2	8-759-910-53	IC CX10054
IC301	8-759-203-85	IC TA7739F
IC302	8-759-701-07	IC NJM2063AM
IC303	8-759-802-80	IC LA4535M
IC601	8-752-012-32	IC CX20123
J301	1-563-298-11	JACK (SMALL TYPE)(DIA. 3.5)
J901	1-563-299-11	JACK, EXTERNAL POWER
L1	1-459-641-11	COIL (WITH CORE)
L2	1-459-642-11	COIL (WITH CORE)
L5	1-410-209-51	INDUCTOR CHIP 27UH
L6	1-410-196-11	INDUCTOR CHIP 2.2UH
L7	1-410-196-11	INDUCTOR CHIP 2.2UH
L8	1-410-204-41	INDUCTOR CHIP 10UH
L11	1-402-182-11	ANTENNA, FERRITE-ROD (MW)
L101	1-410-204-41	INDUCTOR CHIP 10UH
L201	1-410-204-41	INDUCTOR CHIP 10UH
L301	1-410-204-41	INDUCTOR CHIP 10UH
L801	1-410-213-51	INDUCTOR CHIP 56UH
MF1	1-527-383-00	FILTER, MECHANICAL
PH701	8-719-751-43	DIODE NJL5141E-AB
PM901	1-454-406-11	SOLENOID, PLUNGER
Q1	8-729-201-87	TRANSISTOR 2SC2714Y
Q2	8-729-175-73	TRANSISTOR 2SC2757
Q3	8-729-102-06	TRANSISTOR 2SC2223
Q6	8-729-102-06	TRANSISTOR 2SC2223
Q7	8-729-902-93	TRANSISTOR FMG4
Q8	8-729-162-44	TRANSISTOR 2SB624-BV4
Q9	8-729-903-10	TRANSISTOR FMW1
Q10	8-729-159-64	TRANSISTOR 2SD596
Q11	8-729-271-23	TRANSISTOR 2SC2712
Q12	8-729-100-76	TRANSISTOR 2SA812
Q13	8-729-271-23	(US,Canadian NEW)...TRANSISTOR 2SC2712
Q301	8-729-271-23	TRANSISTOR 2SC2712
Q303	8-729-100-76	TRANSISTOR 2SA812
Q601	8-729-162-44	TRANSISTOR 2SB624-BV4
Q602	8-729-271-23	TRANSISTOR 2SC2712

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q603	8-729-271-23	TRANSISTOR 2SC2712
Q604	8-729-162-44	TRANSISTOR 2SB624-BV4
Q701	8-729-903-10	TRANSISTOR FMW1
Q702	8-729-271-23	TRANSISTOR 2SC2712
Q703	8-729-162-44	TRANSISTOR 2SB624-BV4
Q704	8-729-271-23	TRANSISTOR 2SC2712
Q705	8-729-900-51	TRANSISTOR DTA114TK
Q706	8-729-903-10	TRANSISTOR FMW1
Q707	8-729-902-96	TRANSISTOR FMS1
Q708	8-729-100-76	TRANSISTOR 2SA812
Q709	8-729-900-51	TRANSISTOR DTA114TK
Q710	8-729-902-99	TRANSISTOR DTC114TK
Q711	8-729-900-51	TRANSISTOR DTA114TK
Q713	8-729-902-93	TRANSISTOR FMG4
Q714	8-729-271-23	TRANSISTOR 2SC2712
Q715	8-729-162-44	TRANSISTOR 2SB624-BV4
Q716	8-729-902-93	TRANSISTOR FMG4
Q718	8-729-100-76	TRANSISTOR 2SA812
Q719	8-729-902-93	TRANSISTOR FMG4
Q801	8-729-903-10	TRANSISTOR FMW1
Q802	8-729-162-44	TRANSISTOR 2SB624-BV4
Q803	8-729-271-23	TRANSISTOR 2SC2712
Q804	8-729-159-64	TRANSISTOR 2SD596
Q805	8-729-271-23	TRANSISTOR 2SC2712
Q806	8-729-162-44	TRANSISTOR 2SB624-BV4
Q901	8-729-271-23	TRANSISTOR 2SC1623
Q902	8-729-101-07	TRANSISTOR 2SB798
Q903	8-729-101-07	TRANSISTOR 2SB798
Q904	8-729-100-66	TRANSISTOR 2SC1623
Q905	8-729-100-66	TRANSISTOR 2SC1623
Q906	8-729-101-07	TRANSISTOR 2SB798
Q907	8-729-100-66	TRANSISTOR 2SC1623
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W
R2	1-216-013-00	METAL CHIP 33 5% 1/10W
R3	1-216-069-00	(US,Canadian)..METAL CHIP 6.8K 5% 1/10W
R4	1-216-025-00	(US,Canadian)..METAL CHIP 100 5% 1/10W
R5	1-216-113-00	METAL CHIP 470K 5% 1/10W
R6	1-216-013-00	METAL CHIP 33 5% 1/10W
R7	1-216-081-00	METAL CHIP 22K 5% 1/10W
R8	1-216-013-00	METAL CHIP 33 5% 1/10W
R9	1-216-113-00	METAL CHIP 470K 5% 1/10W
R10	1-216-085-00	METAL CHIP 33K 5% 1/10W
R11	1-216-113-00	METAL CHIP 470K 5% 1/10W
R12	1-216-085-00	METAL CHIP 33K 5% 1/10W
R13	1-216-013-00	METAL CHIP 33 5% 1/10W
R14	1-216-085-00	METAL CHIP 33K 5% 1/10W
R15	1-216-025-00	METAL CHIP 100 5% 1/10W
R16	1-216-037-00	METAL CHIP 330 5% 1/10W
R26	1-216-113-00	METAL CHIP 470K 5% 1/10W
R27	1-216-113-00	METAL CHIP 470K 5% 1/10W
R28	1-216-113-00	METAL CHIP 470K 5% 1/10W
R29	1-216-025-00	METAL CHIP 100 5% 1/10W
R30	1-216-113-00	METAL CHIP 470K 5% 1/10W
R31	1-216-049-00	METAL CHIP 1K 5% 1/10W
R33	1-216-049-00	METAL CHIP 1K 5% 1/10W
R34	1-216-073-00	METAL CHIP 10K 5% 1/10W
R35	1-216-069-00	METAL CHIP 6.8K 5% 1/10W
R36	1-216-069-00	METAL CHIP 6.8K 5% 1/10W
R37	1-216-049-00	METAL CHIP 1K 5% 1/10W
R39	1-216-049-00	(AEP,UK,E)...METAL CHIP 1.0K 5% 1/10W
R40	1-216-073-00	(AEP,UK,E)...METAL CHIP 10K 5% 1/10W
R42	1-216-013-00	METAL CHIP 33 5% 1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R43	1-216-049-00	METAL CHIP 1K 5% 1/10W
R44	1-216-113-00	METAL CHIP 470K 5% 1/10W
R46	1-216-085-00	METAL CHIP 33K 5% 1/10W
R47	1-216-049-00	METAL CHIP 1K 5% 1/10W
R48	1-216-081-00	METAL CHIP 22K 5% 1/10W
R49	1-216-085-00	METAL CHIP 33K 5% 1/10W
R50	1-216-049-00	METAL CHIP 1K 5% 1/10W
R51	1-216-049-00	METAL CHIP 1K 5% 1/10W
R52	1-216-085-00	METAL CHIP 33K 5% 1/10W
R53	1-216-073-00	METAL CHIP 10K 5% 1/10W
R54	1-216-093-00	(US,Canadian NEW) ...METAL CHIP 68K 5% 1/10W
R55	1-216-037-00	(US,Canadian NEW) ...METAL CHIP 330 5% 1/10W
R101	1-216-085-00	METAL CHIP 33K 5% 1/10W
R102	1-216-085-00	METAL CHIP 33K 5% 1/10W
R103	1-216-097-00	METAL CHIP 100K 5% 1/10W
R104	1-216-117-00	METAL CHIP 680K 5% 1/10W
R105	1-216-085-00	METAL CHIP 33K 5% 1/10W
R106	1-216-055-00	METAL CHIP 1.8K 5% 1/10W
R107	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R108	1-216-089-00	METAL CHIP 47K 5% 1/10W
R109	1-216-089-00	METAL CHIP 47K 5% 1/10W
R110	1-216-112-00	METAL CHIP 430K 5% 1/10W
R111	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R112	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R201	1-216-085-00	METAL CHIP 33K 5% 1/10W
R202	1-216-085-00	METAL CHIP 33K 5% 1/10W
R203	1-216-097-00	METAL CHIP 100K 5% 1/10W
R204	1-216-117-00	METAL CHIP 680K 5% 1/10W
R205	1-216-085-00	METAL CHIP 33K 5% 1/10W
R206	1-216-055-00	METAL CHIP 1.8K 5% 1/10W
R207	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R208	1-216-089-00	METAL CHIP 47K 5% 1/10W
R209	1-216-089-00	METAL CHIP 47K 5% 1/10W
R210	1-216-112-00	METAL CHIP 430K 5% 1/10W
R211	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R212	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R301	1-216-089-00	METAL CHIP 47K 5% 1/10W
R302	1-216-089-00	METAL CHIP 47K 5% 1/10W
R303	1-216-049-00	METAL CHIP 1K 5% 1/10W
R304	1-216-097-00	METAL CHIP 100K 5% 1/10W
R307	1-216-097-00	METAL CHIP 100K 5% 1/10W
R308	1-216-085-00	METAL CHIP 33K 5% 1/10W
R309	1-216-055-00	METAL CHIP 1.8K 5% 1/10W
R310	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R311	1-216-025-00	METAL CHIP 100 5% 1/10W
R312	1-216-101-00	METAL CHIP 150K 5% 1/10W
R313	1-216-113-00	METAL CHIP 470K 5% 1/10W
R601	1-216-049-00	METAL CHIP 1K 5% 1/10W
R602	1-216-073-00	METAL CHIP 10K 5% 1/10W
R603	1-216-073-00	METAL CHIP 10K 5% 1/10W
R604	1-216-085-00	METAL CHIP 33K 5% 1/10W
R605	1-216-083-00	METAL CHIP 27K 5% 1/10W
R606	1-216-091-00	METAL CHIP 56K 5% 1/10W
R607	1-216-077-00	METAL CHIP 15K 5% 1/10W
R608	1-216-089-00	METAL CHIP 47K 5% 1/10W
R609	1-216-049-00	METAL CHIP 1K 5% 1/10W
R610	1-216-001-00	METAL CHIP 10 5% 1/10W
R611	1-216-097-00	METAL CHIP 100K 5% 1/10W
R612	1-216-101-00	METAL CHIP 150K 5% 1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R613	1-216-049-00	METAL CHIP	1K	5%	1/10W
R614	1-216-049-00	METAL CHIP	1K	5%	1/10W
R615	1-216-101-00	METAL CHIP	150K	5%	1/10W
R616	1-216-097-00	METAL CHIP	100K	5%	1/10W
R617	1-216-001-00	METAL CHIP	10	5%	1/10W
R618	1-216-049-00	METAL CHIP	1K	5%	1/10W
R701	1-216-089-00	METAL CHIP	47K	5%	1/10W
R702	1-216-085-00	METAL CHIP	33K	5%	1/10W
R703	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R705	1-216-035-00	METAL CHIP	270	5%	1/10W
R706	1-216-105-00	METAL CHIP	220K	5%	1/10W
R707	1-216-113-00	METAL CHIP	470K	5%	1/10W
R708	1-216-025-00	METAL CHIP	100	5%	1/10W
R709	1-216-097-00	METAL CHIP	100K	5%	1/10W
R710	1-216-049-00	METAL CHIP	1K	5%	1/10W
R711	1-216-089-00	METAL CHIP	47K	5%	1/10W
R712	1-216-097-00	METAL CHIP	100K	5%	1/10W
R713	1-216-073-00	METAL CHIP	10K	5%	1/10W
R714	1-216-049-00	METAL CHIP	1K	5%	1/10W
R715	1-216-097-00	METAL CHIP	100K	5%	1/10W
R716	1-216-121-00	METAL CHIP	1M	5%	1/10W
R717	1-216-121-00	METAL CHIP	1M	5%	1/10W
R718	1-216-121-00	METAL CHIP	1M	5%	1/10W
R719	1-216-121-00	METAL CHIP	1M	5%	1/10W
R720	1-216-113-00	METAL CHIP	470K	5%	1/10W
R721	1-216-121-00	METAL CHIP	1M	5%	1/10W
R722	1-216-097-00	METAL CHIP	100K	5%	1/10W
R723	1-216-097-00	METAL CHIP	100K	5%	1/10W
R724	1-216-073-00	METAL CHIP	10K	5%	1/10W
R725	1-216-025-00	METAL CHIP	100	5%	1/10W
R726	1-216-097-00	METAL CHIP	100K	5%	1/10W
R727	1-216-049-00	METAL CHIP	1K	5%	1/10W
R728	1-216-085-00	METAL CHIP	33K	5%	1/10W
R732	1-216-089-00	METAL CHIP	47K	5%	1/10W
R733	1-216-073-00	METAL CHIP	10K	5%	1/10W
R734	1-216-073-00	METAL CHIP	10K	5%	1/10W
R801	1-216-083-00	METAL CHIP	27K	5%	1/10W
R802	1-216-085-00	METAL CHIP	33K	5%	1/10W
R803	1-216-085-00	METAL CHIP	33K	5%	1/10W
R804	1-216-049-00	METAL CHIP	1K	5%	1/10W
R805	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R806	1-216-113-00	METAL CHIP	470K	5%	1/10W
R807	1-216-085-00	METAL CHIP	33K	5%	1/10W
R808	1-216-113-00	METAL CHIP	470K	5%	1/10W
R809	1-216-035-00	METAL CHIP	270	5%	1/10W
R810	1-216-007-00	METAL CHIP	18	5%	1/10W
RV1	1-230-989-11	RES, ADJ, METAL GLAZE 4.7K			
RV2	1-230-991-11	RES, ADJ, METAL GLAZE 22K			
RV3	1-230-991-11	RES, ADJ, METAL GLAZE 22K			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
RV4	1-237-245-21	RES, VAR, CARBON 100K (TUNING)
RV14	3-831-441-XX	SPACER
RV101	1-237-002-11	RES, ADJ, METAL GLAZE 2.2K
RV201	1-237-002-11	RES, ADJ, METAL GLAZE 2.2K
RV301	1-230-578-11	RES, VAR, CARBON 10K/10K (VOL)
RV601	1-237-004-11	RES, ADJ, METAL GLAZE 10K
S1	1-570-402-11	SWITCH, SLIDE (FUNCTION)
S2	1-570-397-11	SWITCH, SLIDE (BAND)
S301	1-570-395-11	SWITCH, LEAF (FWD/REV)
S302	1-570-397-11	SWITCH, SLIDE (TAPE)
S303	1-570-397-11	SWITCH, SLIDE (DOLBY NR)
S701	1-570-548-11	SWITCH, LEAF (POWER,FF/REW)
S702	1-570-395-11	SWITCH, LEAF (DIRECTION)
SB	1-528-190-12	BATTERY
T1	1-404-583-11	IFT
T2	1-406-177-11	COIL
T3	1-448-302-11	TRANSFORMER, DC-DC CONVERTER
T801	1-447-864-11	TRANSFORMER, DC-DC CONVERTER

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
151	3-795-748-21	(US)...SAFETY INSTRUCTIONS, HEADPHONE
152	3-765-346-11	(AEP,UK,E).....MANUAL, INSTRUCTION
	3-765-346-21	(US,Canadian)...MANUAL, INSTRUCTION
	3-765-346-31	(Canadian).....MANUAL, INSTRUCTION
	3-765-346-41	(AEP).....MANUAL, INSTRUCTION
153	3-334-867-01	SPACER
154	8-952-265-90	(E).....HEADPHONE MDR-E215/Y SET
	8-952-265-91	(E).....HEADPHONE MDR-E215/W SET
	8-952-267-90	(US,Canadian,AEP,UK) ...HEADPHONE MDR-A15L/Y SET
	8-952-267-91	(AEP,UK)...HEADPHONE MDR-A15L/W SET
155	3-334-870-01	(US).....INDIVIDUAL CARTON
	3-334-872-01	(Canadian,AEP)...INDIVIDUAL CARTON
	3-334-877-01	(E).....INDIVIDUAL CARTON
	3-334-878-01	(UK).....INDIVIDUAL CARTON
156	3-334-856-01	CUSHION (B)
157	3-334-858-01	CUSHION (A)
158	1-550-242-21	(US:YELLOW)...CASE, BATTERY